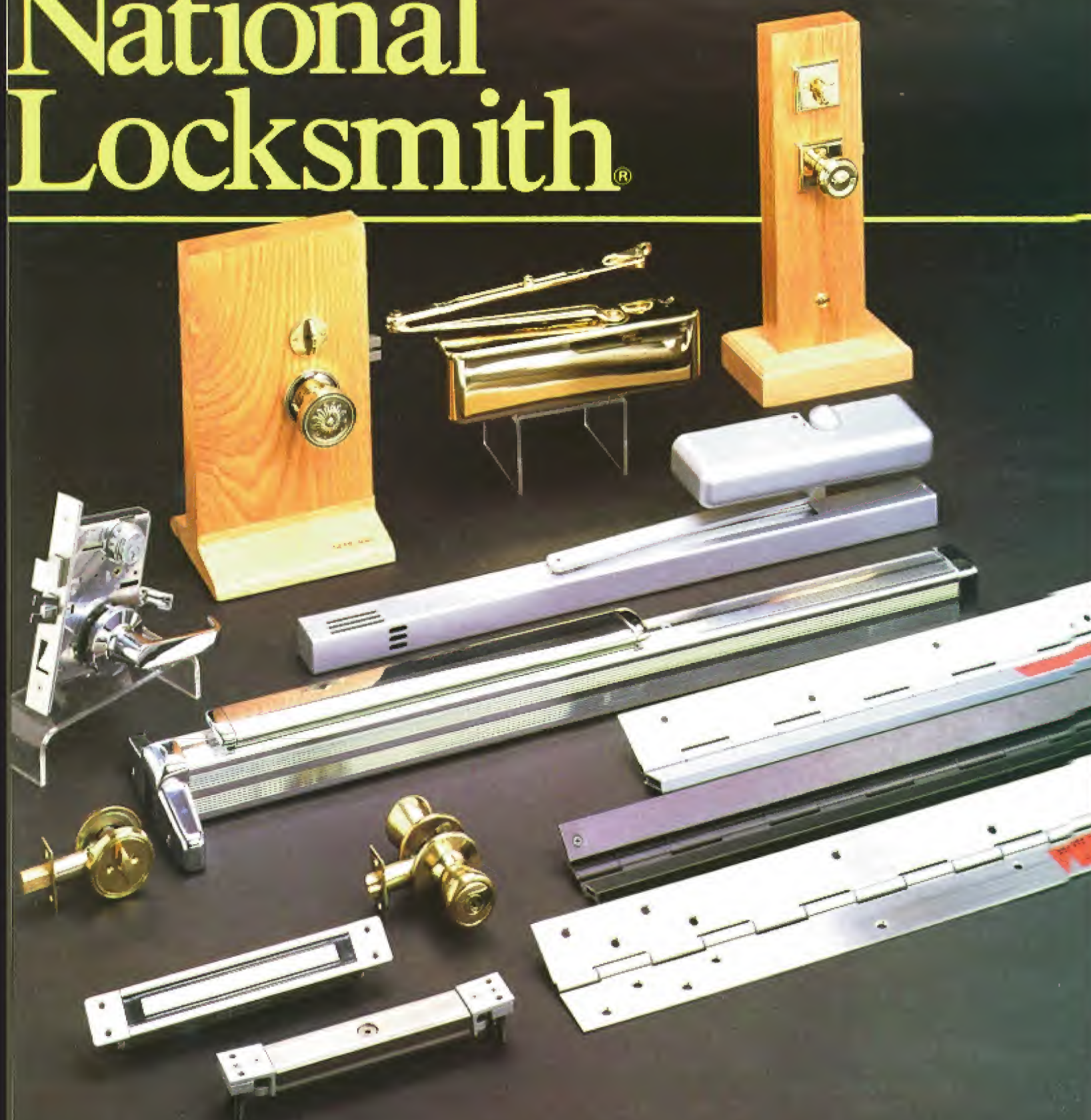


# April 1988

# The National Locksmith<sup>®</sup>



## Door Hardware Issue



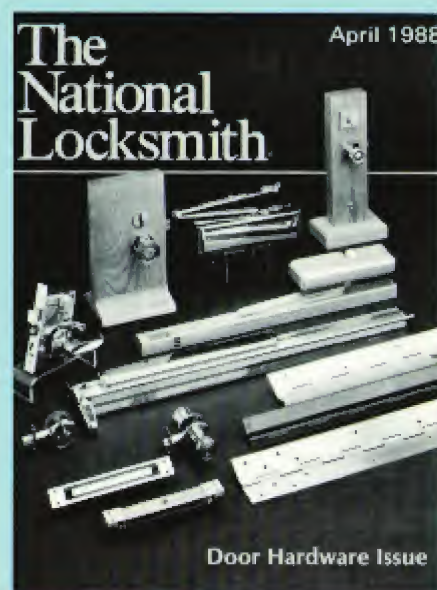
The National Locksmith • April 1988 • Volume 59, Number 4

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*Click on the article  
you wish to read*



### On The Cover

This month's cover features door hardware products from the following companies (in alphabetical order): Dorma Door Controls, LCN Closers, Lloyd Matheson Inc., Locknetics, Lori Lock, Markar Products, Noblit Industries, Schlage Lock Co., and Von Duprin. (Cover photo by Dave Wilkes.)

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# Commentary

## What's An Association?

Associations for locksmiths are, on the whole, wonderful organizations dedicated to improving the lives of their members. A proper locksmith organization offers a wide range of benefits including (but not limited to): conventions, training classes, regular meetings, and award banquets. What are the biggest benefits that locksmiths obtain from joining an association? New skills can be learned and also of importance, you get the chance to mix and socialize with your fellow professionals.

I strongly suggest that you join a legitimate locksmith association. But you do have to choose carefully because not every association offers as much as the next. One good rule of thumb to use is to be sure that any association you think of joining holds regular elections so the membership can select who will run the group. After all, an association belongs to its membership. If you do not have the right to vote for a president and board of directors, you do not belong to a real association.

Now, before someone starts screaming, "What about The National Locksmith Association?", let me explain. The National Locksmith Association (or NLA) was started in 1929 by Stan MacLean. He also began *The National Locksmith* magazine as the official magazine of the NLA. Keep in mind that these were the days of the depression, many years before ALOA or any other locksmith association existed to serve its membership. Stan formed the NLA and this magazine to put locksmiths in touch with one another and to share information. That was radical thinking back in 1929.

Today, *The National Locksmith* magazine follows the tradition of keeping locksmiths in touch with one another and sharing information. We do print the name NLA on the masthead of the magazine and on our Bond Cards. We do this to honor the long history of the magazine and in memory of Stan MacLean who worked all his life for the locksmith. However, we *do not* claim to be an active association. We are a magazine originally started to serve NLA. What remains in 1988 is this magazine, dedicated to serving you. That is why there are no elections for the NLA—it is not an active association, and we do not solicit for membership in the NLA. We solicit subscriptions for the magazine.

That aside, let me point out that there are businesses out there soliciting you for membership in so called "associations." The best way to tell if a group is a *real* association is to inquire if annual elections are held to choose the officers and to determine how the money is spent. If not, then in my humble opinion, the group is more like a club than an association.

Should you join anyway? Perhaps. But it is up to you to evaluate the advantages and costs of joining. Are you going to get your money's worth? If you think that the benefits you are offered are worth the cost, then go ahead and join. But don't think you are joining an association like ALOA or a regional unless you get to vote for officers. As a *member* of an *association* you also have a say in how the money is spent.

Am I the pot calling the kettle black because of the NLA? No way! As I explained, it is not an active group and no one solicits membership or money. We solicit for the magazine instead. By all means, we endorse ALOA and the regional locksmith associations. But there are other people out there asking you for money to join "associations" which do not hold elections. Just be sure you spend your money wisely. If the advantages of giving them money are worth the cost—then join. If you won't get your money's worth, then stay away.



*Marc Goldberg*  
Editor/Publisher

April 5



# Letters

Comments, Suggestions and Criticisms

*The National Locksmith is interested in your views. We do reserve the right to edit for clarity and lengths. Please address your comments, praise, or criticism to: Editor, The National Locksmith, 698 Bonded Parkway, Streamwood, IL 60107.*

## Maryland Locksmith Assoc. Alive and Well

This is to inform you that the Locksmith Association of Maryland is alive and well. We have just recently petitioned ALOA allowing us to form an ALOA chapter. We are stressing the PRP program and education and invite all working locksmiths in Maryland to join our association.

Our mailing address is: Locksmith Assoc. of Maryland, 7254 Gough St., Baltimore, MD 21224.

Vernon Biscoe, Jr.  
Maryland

## Reader Confronts Locksmith Issues

I don't understand the big up-roar over the police or anyone else opening cars. We make more money repairing the cars after they have been attacked by the non-professionals. In fact, we charge double to go out to open the vehicles after a non-professional's attempt, and then we charge to repair whatever damage was done. I do have a problem with the police installing locks or opening houses for whatever reason, that should be of greater concern to our profession.

Next, is ALOA's PRP. From what I read in all the trade magazines, the only people complaining about it, are those who can't pass even RL. Instead of using the time to complain about it, try using the time to learn more. Attend the education put on by your local association or ALOA chapter, and of course, go to the regional and national conventions. Not only the classes that

are given, but the trade show as well. Most of the time you can learn a great deal by talking to the manufacturers and seeing their products. The test not only tells you what you don't know, but it also tells you what you do know; you might be surprised. Yes, the letters after your name is an ego trip, but along with the ego is the confidence in your own ability.

Next is the squabble about the prices that we charge. I know that it is against federal law to discuss prices, but if you add up all your expenses: rent, utilities, advertising, education, insurance, taxes, wear and tear on your equipment, and so on, you might find that your profit margin (%) is not what you thought. If you still aren't convinced what you are worth, call your local TV repairman or refrigerator repairman and ask what they get for a service call. Better yet, try a computer repair service.

Last but not least. I am personally in favor of licensing. It is coming and we all better be ready for it. Our attention should be focused to having laws written that help us serve the public, by locksmiths not by bureaucrats. The laws should rely on a competency test both written and hands-on, with no "grandfather clause," but have provisions for apprentice/student locksmiths and key cutters. They should also restrict the sale and possession of certain tools, such as code books and picks, that are synonymous with our profession.

This is not only a trade, but a profession, so why do we think of ourselves as anything less than a professional? I don't think that there is any one of you that would use a non-licensed electrician or in that case a non-licensed doctor or dentist! The right kind of law should give us the level of professionalism that we deserve. I'm tired of the public image of a locksmith as a dirty little tinker covered with graphite. We are professionals with more knowledge about more things than any other profession.

How many times have you complained about some fly-by-night handyman or so called locksmith who installs or repairs locks or annihilates a master key system that you did. "There oughta be a law!"

I know that this letter will create quite a stir. Ideas, good or bad cause thinking and change, which is something we need, so as not to lay stagnant, but move ahead for the benefit of us all.

Stewart Levine  
New Jersey

## Locksmith Annoyed By 'Non-Pro's' Impressioning

Something really bugs me! I am a certified, bonded locksmith and a graduate of The New York School of Locksmithing. I live near the well known Killington ski resort in Vermont. There's a pretty good market there for automotive locksmithing as people often lose their keys while skiing.

While there are a couple of bonafide locksmiths in nearby Rutland that service this area, there is also a garage/gas station right on the mountain that advertises for auto lock-outs and replacing lost keys. He shouldn't be allowed to do this!

I met one of the gas station attendants and introduced myself as a locksmith. I then asked, "How do you guys do most of your auto lock work?" He said mostly by impressioning. I then asked how he learned that and he said his boss went to a seminar on impressioning and taught him. He teaches all of his employees. I said, you mean just anybody off the street and he said, yes. Keep in mind this is a garage!

I don't service autos at Killington because I don't live quite close enough but I'm thinking of moving there this year and if I do you can bet I'll have a Sears Diehard battery and a set of jumper cables in my truck because I happen to know this garage also makes big bucks jump starting cars that have been sitting in the cold all day.

Bob Ziccardi  
Vermont



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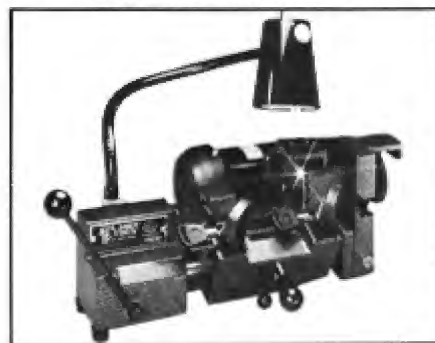
## The Free Flo



### Second Prize

Designed to cut Medeco® and Emhart® keys. Duplicates a Medeco® key very quickly and accurately. Will also cut regular cylinder keys. By Fulton Lock.

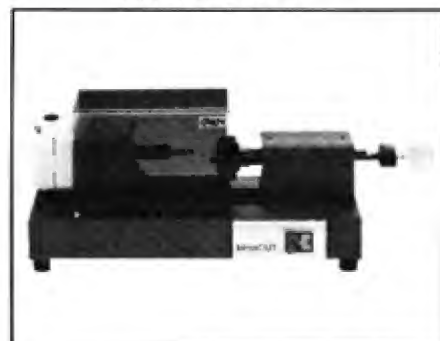
## Saber Tooth



### Third Prize

A fast semi-automatic duplicator featuring carbide cutter, full 1/3 hp motor, 2400 rpm. Working lamp and deburring brush are standard. From The Locksmith Store.

## Ilco KD94



### Fourth Prize

Cuts the 1137 tubular key, brass or steel accurately and quickly. Features include large chuck to hold standard size key heads, easily adjustable.

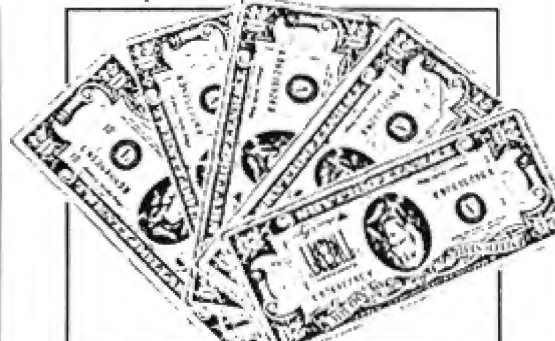
## 9150 Speedex



### Fifth Prize

The Speedex has been transformed from the old stand-by to the machine for today's needs. Features double sided jaws. From HPC.

## \$100.00 Cash



### Sixth Prize

Everyone can use a few extra dollars! This prize will brighten your day...and fatten your wallet.

## Contest Rules

All you need to do to enter is submit a tip, covering any aspect of locksmithing to *The National Locksmith*. Certainly, you have a favorite way of doing things that you'd like to share with other locksmiths. Why not write it down and submit it to: Steve Spiwak, Technitips' Editor, *The National Locksmith*, 698 Bonded Parkway, Streamwood, IL 60107.

Tips submitted to other industry publications **will not be eligible!** So get busy and send in your tips today! You may win cash, merchandise, or even one of several key machines! At the end of the year, we choose the winners of the above prizes.

Last year dozens of people walked off with money and prizes. Wouldn't you like to be one of the prize winners for 1987? Enter today! It's a lot easier than you think!

## Every Tip Wins 'Locksmith Bucks!'

Yes, every tip published wins a prize. But remember, you must submit your tip to *The National Locksmith* exclusively. Each and every tip published in Technitips wins you \$20.00 in Locksmith Bucks! Use this spendable cash toward the purchase of any books or merchandise from *The National Locksmith*. You also receive a Bonded Locksmith bumper sticker, decal and patch. Plus you are now eligible for the really big prizes!

## Best Tip of the month prizes!

If your tip is chosen as the best tip of the month, you will win \$50.00 in cash as well as \$30.00 in Locksmith Bucks! Plus you will receive a quartz Locksmith watch, a Bonded Locksmith bumper sticker, decal, patch and a Locksmith Cap. Plus, you may win one of the great prizes pictured above.



# Technitips

Helpful Hints from Fellow Locksmiths



Send me your Technitips. Who knows, you may be our next winner! c/o The National Locksmith, 698 Bonded Parkway, Streamwood, IL 60107.

by Steve Spiwak

## April's Best Tip

I recently ran into a problem which had me just about ready to pull my hair out. I was working on a Russwin mortise cylinder lockset with a springlatch only. I don't know the model number on this one, but it is the mortise lock with exposed set screws that secure the mortise cylinder in place; it also has a cast iron case.

I had just re-keyed the mortise cylinder and had screwed it back into place and was tightening the set screw. The set screw snapped off about  $1\frac{1}{2}$ " into the lock and only left about  $\frac{1}{4}$ " exposed inside. The part of the screw which snapped off fell into the lock case and jammed the spring latch. There I was with a lock that wouldn't work and no way to back the set screw out so that I could remove the mortise cylinder and take the lock apart. Remember, the remaining part of the set screw was only  $\frac{1}{4}$ " long and  $1\frac{1}{2}$ " inside the lock case. The only way to get to it was

through the hole in the edge of the lock case just above the springlatch and the hole was less than  $\frac{1}{4}$ " in diameter.

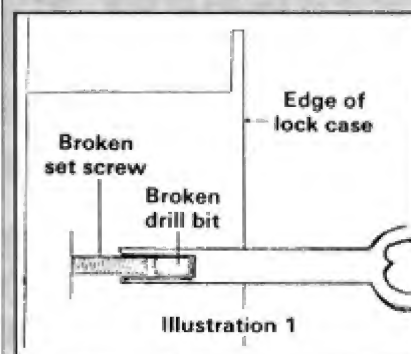
This had only happened to me once before and on that occasion, I had simply removed the mortise cylinder on the opposite side and reached inside with a pair of needle-nosed pliers to unscrew the broken set screw. The lock that was not giving me problems was only a single cylinder.

I didn't want to take a chance on unscrewing the mortise cylinder with channel locks because this mortise cylinder was expensive and forcing it would have stripped the threads. Also, anytime you apply that much torque to the cylinder, you take a chance on cracking the cast iron lock case. (Needless to say, replacement parts are hard to find for an 80 year old lock, and a replacement mortise lockset would have left me in the hole on this job.)

I finally hit on the following idea. I took a bit key blank that had a shank a little smaller than the head of the set screw. (The hole on the edge of the lock case is large enough for the head of the set screw to fit into so that it will be flush with the surface of the lock case after it is tightened down.)

I cut off the end of the blank so

that all that was left was the shank and the bow. Into the end of the shank I drilled a hole that was slightly larger than the threads of the set screw in diameter. Next, I selected an old, broken drill bit that would just fit into the hole. I put this bit into my vise and broke off a small piece so that there were jagged edges on both ends. I dropped this small piece into the hole on the end of the bit key shank. (See illustration 1.) (Break off a piece that will only fill about half the hole.) I



inserted the bit key shank into the set screw hole on the lock case and slid the end of the shank over the exposed end of the set screw. The broken piece of drill bit was now between the end of the set screw and the bottom of the hole in the shank. I tapped the bow of the blank firmly with a hammer which caused the



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edges of the broken drill bit to bite into the set screw and the bottom of the hole in the shank. While pushing in on the bit key, I turned it counter-clockwise, and out came the set screw.

This method is even easier than using an Easy Out especially when you can't see the end of the broken set screw while you're trying to center the pilot hole for the Easy Out.

Geoffrey Weliver  
Indiana

\*\*\*\*\*

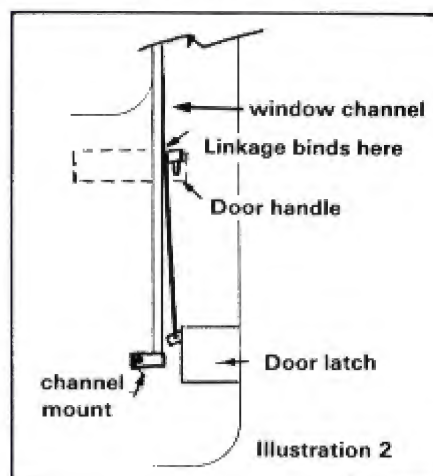
This tip concerns solving a locking problem that may be encountered on late model Ford pick-ups and Broncos. This is the situation: The door will lock manually or with the key but will not unlock with the key. The only way to open the door is to enter from the other side and unlock the problem door with the inside handle. The thing that will throw you off is that this problem appears to be inconsistent. Sometimes it happens, sometimes not. Much time is spent examining the door latch and lock cylinder, but the problem exists elsewhere.

Here is the sequence that makes the

lock inoperative. Lock the door manually or with the key. Shut the door, depress the outside handle button (which many people redundantly do to check if the door is secure). It is the action of depressing the handle button that causes the malfunction.

Here is what is happening: The linkage running from the outside handle to the door latch is binding on the window channel that runs down the inside of the door. The binding occurs where the linkage is connected to the outside handle by a fastener. When the outside handle button is depressed the linkage, which is binding on the window channel, stays in the depressed position even though the outside handle button does not. The latch is now jammed.

The cure is simple. The window channel is mounted to the door at the lower end by one bolt. Relocate the hole in the door frame  $\frac{3}{8}$ " towards the front of the vehicle. This releases the binding and does not affect the operation of the window. (See illustration 2.)



David Parsons  
Utah

\*\*\*\*\*

Recently I was called out to open the trunk on a 1987 Buick Limited. The glove box lock was the slide type. It was locked. As I have previously found they contain a side bar. The door panel was out of the question, so I chose the trunk lock as the best option available.

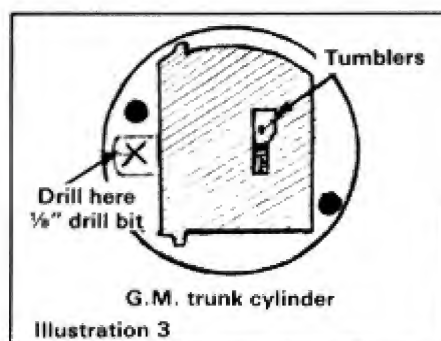
First peel the face cap off, removing the shutter and two springs. To the left of the cylinder is a square indentation. A cordless drill will make this job a breeze (See illustration 3.) If you should drill through the lock and out the rear, nothing can be damaged. This action eliminates the side bar. You can now turn the cylinder and the trunk is open.

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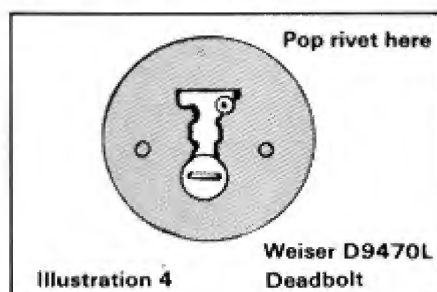


To decode this lock remove the rest of the side bar. Insert the proper key blank and determine the cuts. After doing five or six of these, I've found that it is simpler to go to the trunk to make a door key. Especially if its a Cadillac or a late model GM. The whole job, after a little practice, only takes about 20 minutes. Try pulling a Cadillac door panel in a driving rain storm or bitter cold in 20 minutes.

Steven Mathena  
Tennessee

\*\*\*\*\*

This tip concerns a method for fixing the old Weiser D9470L deadbolt if you have a cylinder that keeps falling out. Use the following procedure:



Use a 3/16" x 1/4" pop rivet. (See illustration 4.) Remove clip and put pop rivet where indicated on illustration. It works perfect!

Advanced Lock & Key  
Minnesota

\*\*\*\*\*

Have you ever found yourself needing a diamond-shaped desk lock with an extra long tailpiece? The order time on something like that could be from a year to life.

I have found an easy way to remedy this situation by using a 2" cam from just about any brand of cam lock. Remove the old bolt, match up with the cam from the cam lock in question, and cut a notch in the cam exactly the same as the original bolt in the desk lock. Place the cam in the lock. The cam will

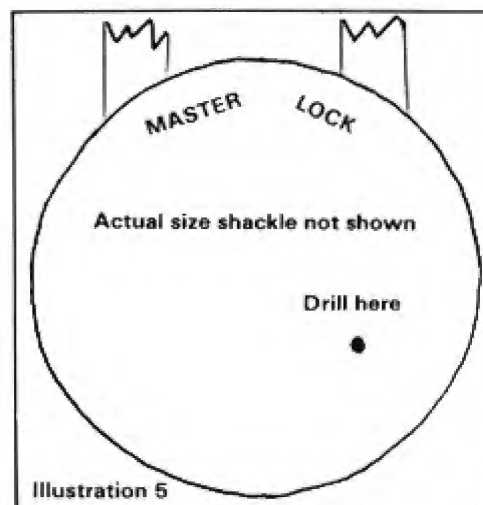
be a bit loose as the thickness is a little less than the original, but this will cause no problems. This method will work on just about any type of desk lock where the core can be removed.

James Cawby  
Kentucky

\*\*\*\*\*

This is a template for determining the combination on the new Master 2001 deadbolt combination lock. (See illustration 5.) The case is stainless steel so use a 1/16" Cobalt drill bit (available at most hardware stores).

You are drilling into a cavity left in



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the manufacturing process for an institutional keyed cylinder. Use an otoscope and subtract 14 from the number at the opening index when you see each gate through the hole. The wheel closest to the back of the lock is the first number.

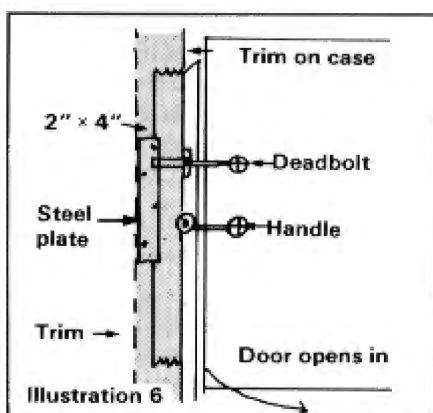
Charles Craig  
Texas

\*\*\*\*\*

Recent burglaries in the area have turned up a method where burglars are kicking the doors in, and splitting the door casings. A lot of new homes are put together with a single 2" x 4" in the door case. Single 2" x 4"s split too easily. The trim is very thin and adds no strength.

My suggestion is to install a plate. I have used this plate in doors and it seems to help. Under the trim it cannot be seen. (See illustration 6.) At most hardware stores it is only .89-.99. This idea may not stop them, but it will slow them up and maybe save your door.

Keith Graves  
New York



\*\*\*\*\*

I frequently get called to re-key rental houses that have a mixture of Kwikset and "Taiwan special" locks. The landlord does not want to hear about replacing those locks that he got at a "great sale price." He just wants all the locks keyed alike.

Many of the Taiwan locks have a Kwikset keyway. The spacing is alright except for the last two pins toward the tip of the key. There is a greater space between pins three and four. This means that on the Kwikset key you would be pinning on the points.

The way to solve this problem is to make cuts 4 and 5 the same depth and file the key smooth to remove the points at these positions. This will let the key operate both the Kwikset and Taiwan locks, and keeps the customer happy.

Arthur Kallbacka  
Texas

\*\*\*\*\*

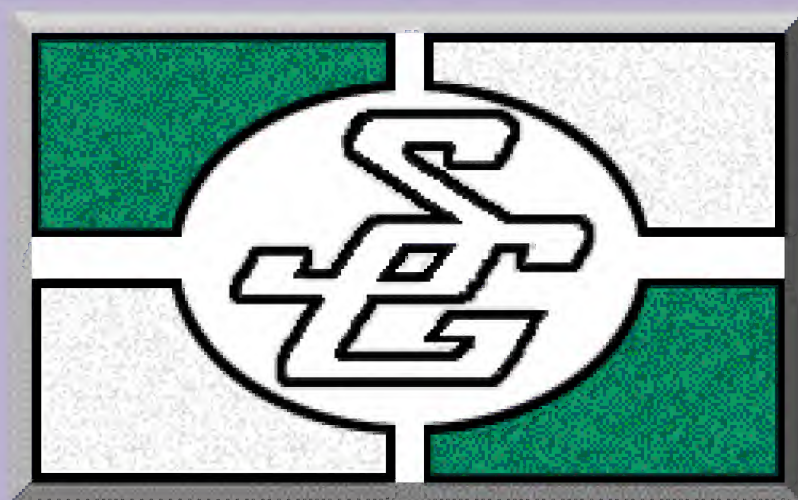
There is nothing worse than a locksmith getting locked out of his own vehicle. To prevent this embarrassing situation, I have cut my key to the second car on the extra blade of my pen knife.

It doesn't have to be exact, simply take a file and eyeball the cuts onto the knife blade and when locked out it'll open the door in a manner similar to a rocker pick. It isn't supposed to work perfectly, just enough to get oneself out of an embarrassing situation.

On my car it's a GM K key, but a standard pen knife will go into many locks.

R. Lazich  
Wisconsin

\*\*\*\*\*



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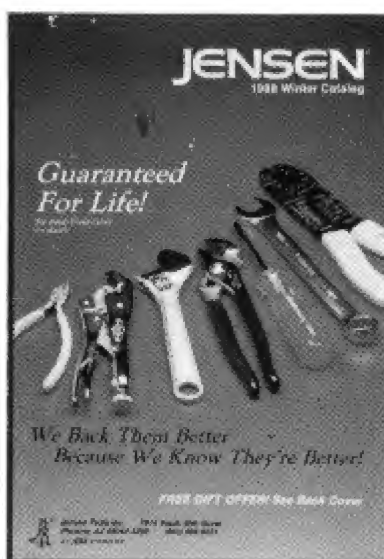
# News-makers

New Products and Industry News

## Jensen Tools Offers Free Catalog

A new Winter catalog is offered free by Jensen Tools. Illustrated in full color, the catalog features new service and maintenance kits and a broad range of tools and test equipment for electrical and electronic technicians.

Included are hand and power tools in inch and metric sizes, work holding devices, lighting and optical aids, new products for wire and cable service, electrical safety products, equipment cases and shipping containers soldering supplies and more.



Circle 293 on Rapid Reply

## Southern Lock & Supply's Security Hardware Catalog

Southern Lock & Supply Co. would like to announce the availability of their 1988 Security Hardware Catalog. The 192-page book contains over 8,000 individual items from more than 130 manufacturers. And as last year, it contains updated pricing information for estimating dealer costs.

Extras such as product cross-references and locksmith technical and program information prove to be useful. A manufacturer's index also makes many items easier to find.

The Southern Lock 1988 Security Hardware Catalog is available *free* of charge to qualified security professionals.

Circle 294 on Rapid Reply

## NATIONAL AUTO LOCK SERVICE, INC.

National Auto Lock Service, Inc. offers a wide range of equipment and services for the Automotive Locksmith. From tools and hard to find key blanks to transponder programming, we can take the mystery out of car service. We accept credit card orders, and can ship COD. Contact us for the latest in automotive technology.

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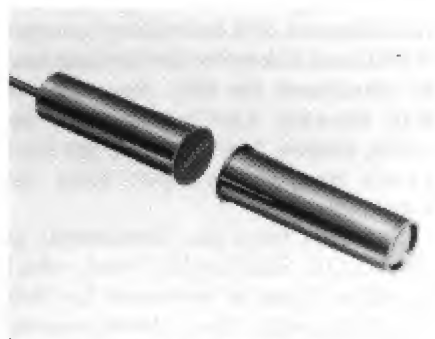


### Sentrol Inc.'s 1075W Wide Gap Contact

The Sentrol 1075W wide gap contact has a long 1¼" gap which prevents false alarms, due to "swingers," on loose fitting doors and windows. The contact also reduces installation time because alignment is less critical.

A new manufacturing process now makes Sentrol wide gap contacts as cost-effective as a standard contact. The 1075W is designed for ⅜" press-fit applications.

Featuring Sentrol specification rhodium plated reeds and Alnico V magnets, the 1075W is rated for 10,000,000 cycle long-term reliability.



Circle 292 on Rapid Reply

### Ignition Lock Displayer From Briggs & Stratton

Briggs & Stratton Technologies announces the availability of a new GM steering column ignition lock displayer for 1988. The attractive acrylic displayer illustrates all current and past model GM steering column locks.

All the new style sector gear locks including VATS and the new 1988 "W" Buick Regal, Pontiac Grand Prix, Oldsmobile Cutlass Supreme are displayed. Contact your Briggs & Stratton distributor for more information.



Circle 291 on Rapid Reply

### Yankee Sec. Convention's Tenth Anniversary

After a very successful 1987 Convention, the Yankee Board of Directors are pleased to announce the dates for the Tenth Anniversary Convention which will be held October 25 - 30, 1988 at the Sheraton Foxborough Inn and Conference Center, Foxborough, Massachusetts.

The program will offer 44 classes and 128 exhibit booths. In addition, the Associated Locksmiths of America, Inc. (ALOA) proficiency registration test will be held.

A cocktail hour and dinner-dance is scheduled for Saturday night.

For information please contact, Yankee Security Convention, Inc., 9 West Third Street, South Boston, Massachusetts 02127 or call (617) 269-5051.

Circle 290 on Rapid Reply

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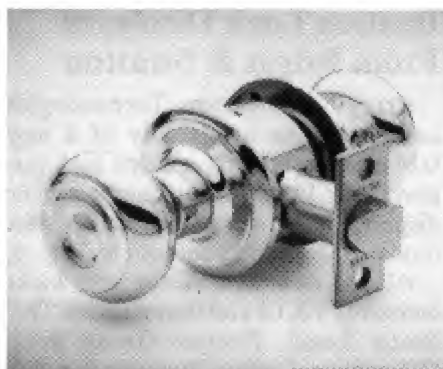
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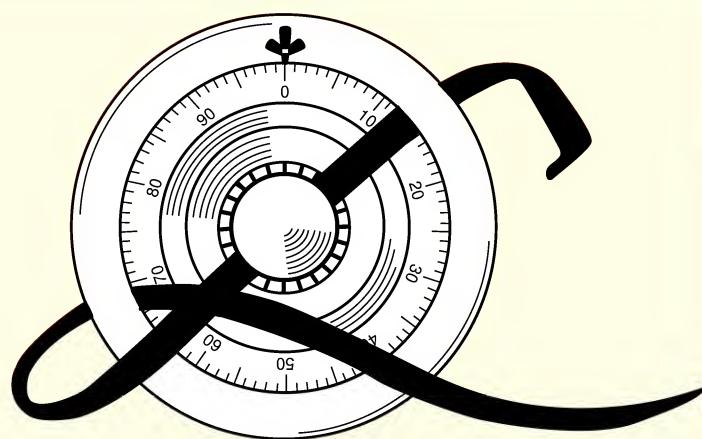
## Commercial Grade Dexter Duralock Locksets

Duralock commercial grade cylindrical locksets from Dexter subsidiary of Master Lock Co., are available in a wide range of functions, styles and finishes to match any decor.

Precision cylindrical mechanism and solid brass and steel construction insure high strength and durability. Steel components are zinc plated and dichromate treated to provide maximum corrosion resistance.



Circle 343 on Rapid Reply



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## ALOA/Yale Plan 3rd Golf Tournament

The Associated Locksmiths of America, Inc., has announced plans for the third annual ALOA Open Golf Classic, to be held Wednesday, June 29, at the Sahara Golf and Country Club, Las Vegas, Nevada. It is being sponsored this year by Yale Security, Inc.

The tournament is open to all golfers, and locksmiths, manufacturers and distributors are invited to join the fun. The entrance fee is \$150 per person, and that includes transportation to and from the Sahara Country Club, orientation and breakfast at the course, a golf shirt with the ALOA Open logo, 18 holes of golf with a cart, gifts, prizes, refreshments, and an evening banquet. Additional tickets for the banquet may be purchased for \$30. According to Reg Moxley, Co-Chairman for the event, players "will certainly get back every penny they put into the tournament."

Proceeds from the tournament go the ALOA Scholarship Fund, which provides financial assistance for individuals to further their education in the locksmith profession.

Questions about the tournament may be directed to Ellie Wooderson at the ALOA office, 3003 Live Oak Street, Dallas, TX 75204, (214) 827-1701.

Circle 345 on Rapid Reply

## Valli & Colombo's Desipro Handles Brochure

Valli & Colombo's Desipro (Designs in Progress) brochure is now available. Desipro is the first designer line of door handles especially developed for the handicapped. The handles combine aesthetics in design along with a functional need that is intended to help the disabled operate door and window handles independently, despite any hand grip dysfunctions.

The brochure lists door and window handles as well as specially designed key grips that complement Desipro handles. The key grips have been created for use by hands that may not be able to make rotation movements around the wrist or cannot contract or make minute grips.

Circle 344 on Rapid Reply



## Chuck Key Eliminator Handy For Tools

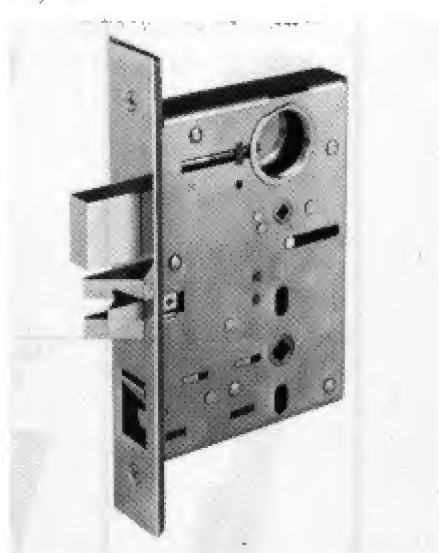
The Chuck Key Eliminator is a product to replace chuck keys for drills. With the Chuck-Key Eliminator most of the sizes are covered by just two size Chuck-Mates for  $\frac{1}{4}$ ",  $\frac{3}{8}$ ", and  $\frac{1}{2}$ " chucks. The only requirement is that the drill be variable speed and reversible. The Chuck-Key Eliminator does not work on single speed drills. There are about 35,000,000 R,VS drills now on the market that are prospects for the tool.

With the product in place, a chuck becomes fully automatic, powered by the drill motor.



## Lloyd Matheson New Mortise Lock

The 7100 Series mortise locks are new from Lloyd Matheson/Lockwood. These heavy duty locksets feature a case of heavy gauge corrosive resistant steel measuring  $5\frac{7}{8}$ " x 4" x  $1\frac{15}{16}$ ".



The 7100 Series conforms to ANSI A 156.13 Series 1000 Grade 1. This series comes standard as a completely non-ferrous lockbody. All wrought parts, pins, fasteners and springs are made of corrosive resistant stainless steel.



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## Intermountain Offers New Catalogs

The new catalogs from Intermountain Lock & Supply are completely computerized with inventory numbers and pictures and a full page printed at a time. They catalog only the numbers they attempt to keep in stock.

Intermountain also furnishes a complete price list, updated several times a year.

Catalogs include: The Wholesale Book of Locksmith Supplies; Intermountain Locks, Safes, Tools, General Locksmith Supplies; and The Intermountain 1988 Key Blank Catalog and Reference Guide.



## Electronic Deadbolts

"There are business opportunities for the sale and installation of electronically controlled security devices. Let's walk through an installation right now."



Send your lock and key questions to Jack Roberts, The National Locksmith, 698 Bonded Parkway, Streamwood, IL 60107.

by Jack Roberts

I recently visited several shops in neighboring states and found that there are many locksmiths who feel that they are not ready for "high tech," as the term may be applied to electronic security, and are intimidated by the very thought of learning the new skills that are necessary. However, with today's modern technology and the

rapid advancements in the field of security, it is evident that we had better learn these things if we are going to cash in on this new wave of door security.

Maybe the terms "high tech" and "electronic security" are what many of us are afraid of, yet we encounter these things almost every day as we learn the intricacies of servicing the new Ford wafer locks, the GM VATS system, or high security cylinders. We should be learning new skills rather than to continue spending so much time worrying about police opening cars or discount stores selling locksets at below our cost. We had better learn

if we are going to progress and grow.

If we consider the development of security devices we will see that lock technology has progressed in steps through many phases and that each step was "high tech" until it was replaced by another step. Each step has presented the need for continued education and training for those of us who intend to keep abreast of the times. A lock is a lock and only the manner in which that lock is operated has changed from the bit key to the paracentric key to the high security key and various other means of control.

Considering the business opportunities for the sale and installation of elec-



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tronically controlled security devices this month we will walk through the installation of an electronically controlled deadbolt.

In other issues we described the "switching circuitry" that may be for required "electromagnetic" lock installation. That same circuitry may be applied to the installation of an "electronically controlled" deadbolt and although some of the terminology used in switching circuitry is new to many of us, one certainly doesn't have to be a full blown electrician to be able to tackle the wiring of these installations.

Knowledge of the various controls is essential, however, and the basics can be learned in a short time through books for home study or by attending one of the many classes that are offered throughout the country at various times.

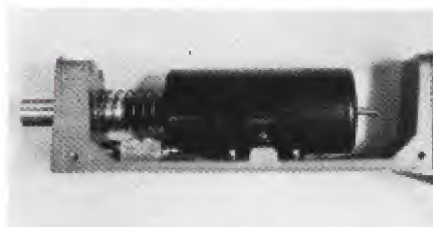
Two other new terms which have surfaced in recent years are "fail safe" and "fail secure" which were explained in another issue. While fail secure does not apply to electromagnetic locks since they are "fail safe" only, it is vitally important when considering the application of an electronically controlled deadbolt. Requirements of

management and code must be met and the proper device must be selected.

As a further aid in understanding these two terms, fail safe devices are often referred to as "PL," Power to Lock, and fail secure as "PUL," Power to Unlock. These are pretty simple if you just think about them for a minute. If there is no power, either from the switching circuitry or from a power failure, the bolt of a fail safe (PL) lock



1. Retracted bolt of a fail safe (PL) lock.



2. Bolt thrown due to a power interruption on a fail secure (PL) lock.

is retracted. (See photograph 1.) In like manner, if there is a power interruption to a fail secure (PUL) lock, the bolt is thrown. (See photograph 2.) The physical action of both of these devices is controlled by a spring which throws or retracts the bolt if the power supply is interrupted in any manner. Since springs do have a tendency to become weak, corrode or break, some models of both devices have a dual feature, usually optional, known as "repelling magnets" which assist the spring action and help to extend the life of the spring.

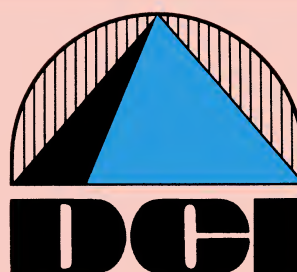
Installation of a surface mounted electrically controlled deadbolt is rather simple and easy, but must start with proper planning of the customer's requirements. The switching circuitry must be drawn (see illustration 3) and the necessary wiring pulled to the lock location. Strikes (or keepers) are available for any kind of installation and many manufacturers offer a selection with each lock (see photograph 4) to cover various requirements such as angle, surface, etc.

Our installation is on an aluminum frame out swinging door and requires a "PL" fail safe device. Templates are provided with all locks of this type and



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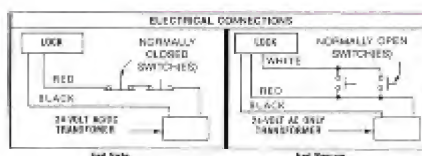
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***We have Security***  
***E xit D evices.***

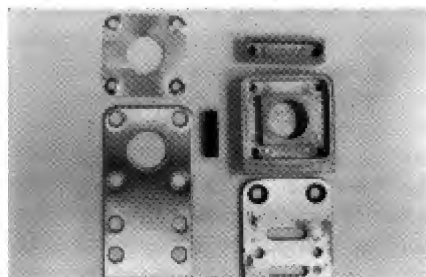
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**Illustration 3**

should be used for laying out the drill points. The template is taped to the header and the mounting holes marked



**4.** A selection of strikes and keepers available for any installation.



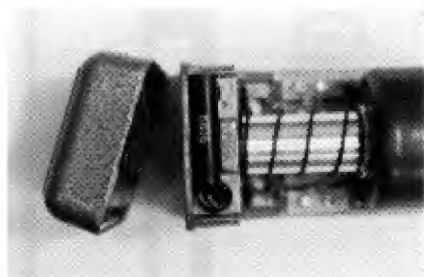
**5.** Mounting holes are determined by the template and marked with a center punch.

with a center punch. (See photograph 5.) Use the proper size bit as shown on the instruction sheet and drill the mounting holes for the lock and the strike. An angle strike is necessary for this installation and is assembled from the parts supplied. (See photograph 6.)

All locks of this type have a safety feature which prevents the bolt from throwing unless the door is closed. This



**6.** Angle strike is assembled from parts supplied.



**7.** Magnet controlled reed switch.

model uses a "reed switch" (see photograph 7) which is controlled by a magnet in the strike. The magnet is placed in a cavity in the strike body, (see photograph 8) the cover plate attached, and the strike attached to the door. The wiring connections are made and the lock body is mounted to the header using the screws provided. (See photograph 9.) Some shimming may



**8.** Magnet placed in a cavity in the strike plate.



**9.** Lock body is mounted on the header.



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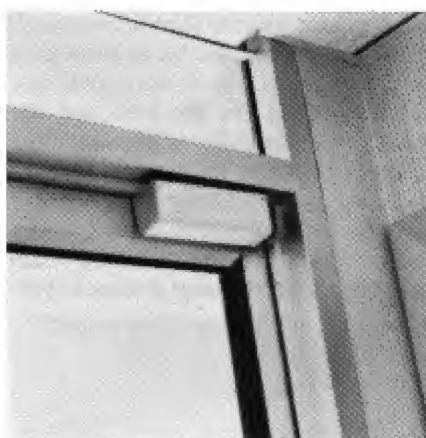
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be required to properly align the bolt with the strike, the cover plate (see photograph 10), and the unit is ready for use.

It is important to understand the function of the "reed switch" and the proper placement of the controlling magnet. This switch is normally open (NO) and interrupts power to the solenoid until it is closed by the magnet when the two are aligned by closing the door.

The strike has four cavities in which the magnet may be placed to allow for different types of installations and the magnet must be directly opposite the



10. Unit with cover plate installed.

reed switch when the door is in the closed position. (See photograph 7.) It should be noted that some models of electrically controlled deadbolts incorporate a built-in switch on the lock body which serves the same function as the magnet described.

Electronic locks are available which provide a "mechanical manual release" which means that a standard mortise can be used with the unit which, of course, can be keyed in the conventional manner as may be required by management. Installation of a concealed electronic lock is much the same as that of any mortise type lock. A cut-out is made in the tube (the tube is the frame of an aluminum or steel door opening), tabs are attached to the inside of the opening, and the necessary wiring is pulled through the tube and connected to the device. The unit is then placed in position and attached to the tabs with mounting screws. The strike, with its repelling magnet if required, is installed in the same manner by making a cut-out in the edge of the door, attaching the mounting tabs and installing the strike.

When installing an electronic lock in a wood door frame it is good practice, and often required, to install an electric box for mounting the lock. This type of installation will require extra time and labor in making the mortise and should be considered when making an estimate of charges. Wiring is often more difficult to pull for a wood frame installation and this must also be considered.

Electronic locks are available for practically any type of door control, panic bars, sliding doors, gates, etc. Control may be further enhanced, by means of switching circuitry, to include fire and/or smoke detectors, "variable time delay" or any type of sensor that may be required including the "automatic relock safety." The ARS provision will not allow the bolt to be thrown until the door is properly closed and can be monitored at the controlling console with an alert signal that the door is not locked. Monitoring is attained by the use of "switching circuitry" to inform the console or the annunciating panel that the bolt is in the locked or unlocked position and/or that the door is open or closed.

The application of electronic security to your "bag of tricks" is not really all that difficult to learn and the time spent could easily result in higher earnings in the coming years. Why not "throw the switch" and cash in on this new technology? ■

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## Von Duprin Exit Devices

"The chrome finish and clean lines of the devices complement the functional, attractive architecture of the Ketchum-Downtown YMCA building."

Almost 100 chrome-finish exit devices are combined with an electrical monitoring and alarm system at the new Stuart M. Ketchum-Downtown YMCA in Los Angeles, to control unauthorized door usage while providing a safe way out in case of an emergency.

The new facility is located atop the ARCO parking garage at Fourth and Hope Streets in downtown Los Angeles. Its 84,000 square foot area encompasses two gymnasiums, an indoor running track, 75' x 35' glassed-in swimming pool, complete machine exercise room, courts for racquetball and many more features. Located conveniently for the downtown workforce, it is dedicated to improving the quality of life for business people, as well as for the community's youth and seniors.

Protecting the many doors throughout the facility are Von Duprin 88 Series Exit Devices. These are used on all emergency doors as well as solid doors between various areas in the facility. Doors are equipped with electrically monitored strikes, and a Von Duprin 2100 console, located at the main reception area, permits monitoring of all door operations. To prevent unauthorized use, exterior doors are alarmed as well as monitored.

On some glass exterior doors, particularly those leading to a patio area, Von Duprin 33 Series Touch Bar Devices are installed, rather than the familiar lever-type 88 Series devices. Regardless of monitor or alarm status, all devices provide immediate egress in case of any emergency.

The chrome finish and clean lines of the devices complement the functional, attractive architecture of the Ketchum-Downtown YMCA. Designed to appeal to health and fitness-conscious men and women, the facility's style is at once modern and exciting. In this atmosphere, the exit devices quietly provide the combination of safety and security that members expect.

Additional information on Von Duprin Exit Devices may be obtained from Von Duprin, Inc., 2720 Tobey

Drive, P.O. Box 6023, Indianapolis, IN 46206, (317) 897-9944. ■



Von Duprin 33 Series Touch Bar devices are used here along with any armed and monitored strike, on glass door leading to the patio.



# Electromagnetic Locking

"If heavy industry uses this technology every day to move tons of dead weight, there is no question that it can be used to secure an eight foot door."

by Joel Fastow

The electro-magnetic lock industry has barely scratched the surface of the security and builders' hardware industry, partially due to the lack of information available to the professional locksmith and architectural hardware consultant. With the sudden attention placed on life safety standards, the electro-magnetic lock industry has again taken the forefront due to their inherent fail safe (power on locking) design, low voltage requirements, and endless applications.

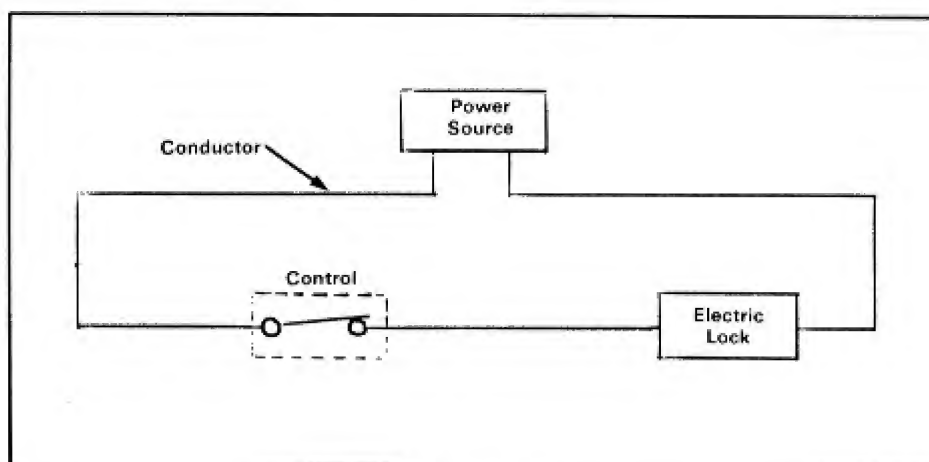
Resistance to the use of magnetic locks comes from several fronts, most commonly the concern that there is no actual bolt entering a physical strike. Since an electro-magnetic lock depends on a bonding surface (the point where magnet and armature touch), many locksmiths feel uneasy relying on this small area for securing and locking the door. Let me assure you that it can, and with more reliability than the conventional locks sold today. If heavy industry uses this technology daily to move tons of dead weight, there is no question that it can also be used to hold an eight foot door locked and secure.

A second area of concern is wiring. All electro-magnetic locks sold today are of low voltage, 12 or 24v variety. The basics of a system design are no more complicated than that of wiring an electric light. The four parts of an electric circuit are integral to the design of a Mag lock installation: 1) The load which in this case is a magnet. 2) The power source is a transformer or power control unit. 3) There are conductors or wire. 4) And finally there is the control or switch. With these basic components, a simple but effective system can be designed.

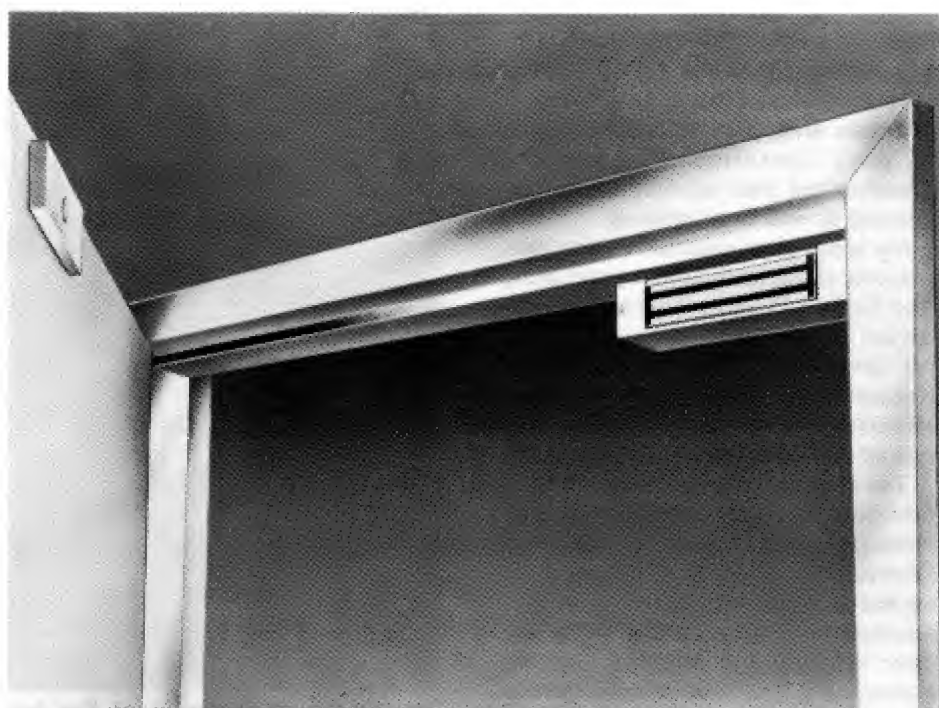
If specific questions arise, all your major electro-magnetic lock manufacturers have highly trained, and reliable customer service engineers available to discuss application and assist you with the design of your system.

In today's complex market, the use of electro-magnetic locks can be the answer to both security and life-safety without compromising either. The unique floatation of the armature and absence of moving parts creates a sale with little follow-up service and the

potential for large profits on optional equipment. So what are you waiting for? Access control, computerized HVAC and security systems all require locks, and the opportunities are there for the asking.

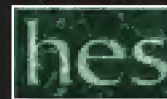


Wiring Diagram



Locknetics surface mounted Powerlock II.





## A New Magnetic Lock

"Unlocking occurs by dialing in the correct codes. The difference is that the magnetic lock key, about the size of a quarter, is also the dial."

A magnetic lock, developed by G.N.I., Santa Rosa, CA represents the marriage of the key to the combination, by utilizing sophisticated magnets to operate its lock mechanism.

There are many types of locking devices which are magnetically actuated or controlled. In most cases, these devices mimic conventional key operated tumbler locks in design and operation. Thus, they can suffer the same types of drawbacks, (i.e., pickable, disabled by foreign matter entering the key slot, or from moisture produced corrosion). Most also utilize many moving parts, can be demagnetized, and do not offer the ability to change combinations in the field. The new magnetic lock mechanism requires considerably less space than conventional door lock hardware, has fewer moving parts, and is sealed from the elements.

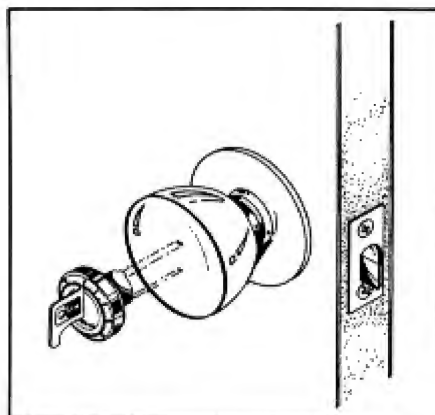
There are four basic components—plunger, inner sleeve, slip ring, and locking spheres seated in the lock mechanism. The plunger, containing an array of permanent, high power magnets moves axially and rotationally within a keywayed sleeve. Positioned on the top of the sleeve is a keywayed slip ring that rotates when the plunger key engages a tang positioned on its surface. When the key is engaged and the correct cyphers dialed in, the plunger key aligns the slip ring keyway with the sleeve keyway. The plunger then can move up and down the aligned keyways, permitting locking and unlocking to occur. Locked means free turning or disengagement from the latch mechanism.

In a manner similar to a conventional combination lock, a spin of the key actuator locks the unit. Unlocking occurs by dialing in the correct codes. The difference is that the magnetic lock key, about the size of a quarter, is also the dial. The lock face itself is devoid of any mechanism.

Depending on the level of security



The newest magnetic lock.

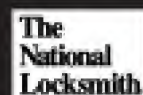
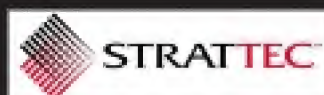
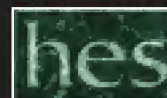
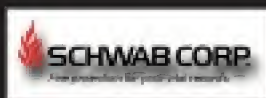


G.N.I.'s lock magnetically activated locking mechanisms power this lock.

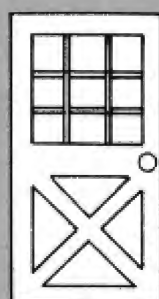
desired, the lock can be simplified to a turn of the dial to lock and unlock. Key and lock series are determined by the physical interface of the key and lock as well as the combination of cyphers. Duplicate keys can be obtained from the factory. Master keys for a specific lock series or interface are available. The locksmith only needs to know the combination cypher code to operate the particular lock.

The manufacturer is currently seeking to license the technology to the hardware industry. For more information contact: Gard-Nut, Inc., P.O. Box 1675, Santa Rosa, CA 95402, (707) 528-8083. ■





or hardware



# DOOR

# HARDWARE

In this section you will find a variety of items that all have at least one thing in common...door security. Each of these products in some way concerns itself with keeping "them" out. Whether it is a new kind of screw, a new lock, or other protective device, door security hardware is really at the core of locksmithing. If you require more information about any of these products, circle the appropriate number on the Rapid Reply Card.

There is more to door security than locks, although they certainly are the primary security feature. Still, a lock is only as good as the door it secures, and the frame/jamb into which it fits. While you are installing

fine locks, make sure that the door and frame are adequate for the job. If not, sell and install some door and frame reinforcement hardware. For an example of such an item, see some of the products featured in this section.

Allow us to take this opportunity to once again ask you to take the extra trouble to *sell* a little bit more on your next service call. Once you have made the trip, it pays to take home a little extra profit. Reinforcement hardware and upgrading of current security are two methods to increase your dollar volume per call. This is good for you, your distributor, the manufacturer, and ultimately, your customer. **MG**

## Abloy Disklock Security Cylinder

The Abloy Disklock® high security cylinder is becoming a popular part of door hardware. The cylinder features a series of rotating disc tumblers offering durability and masterkeying capabilities. These cylinders are easily adapted to fit lock sets and exit devices from most major manufacturers and are available in a variety of BHMA finishes.

In addition to replacement cylinders, Abloy's product line features padlocks, cam locks, switchlocks, and deadbolt locks.



Circle 395 on Rapid Reply

## American Shield's Knob/Lever Trims

American Shield Corporation has introduced a line of knob and lever trims for the JPM 90 series exit devices.

These trims are available for immediate delivery in white, aluminum, duranodic and black textured epoxy finishes. They may be ordered with or without a cylinder protector, and a back plate is available for doors with the ANSI 161 cutout.

In addition to the geometric-style knob pictured below, the trim is also offered with a lever handle or a round ball knob.



Circle 396 on Rapid Reply

## Interchangeable Cores By Arrow

Interchangeable cores from Arrow Lock Corporation offer building owners added security as cylinders can be changed quickly in the field. Using a special key, the locksmith can take the cylinder out and replace it without removing the lock from the door.

These cores are available for heavy-duty commercial and deluxe cylindrical locks, extra heavy-duty security tubular deadlocks, mortise locks and rim cylinders.

In addition, Arrow offers a full range of service tools for the system.



Circle 397 on Rapid Reply

## New Corbin C-6 Keying Kit

Corbin has developed a universal keying kit and replacement vial program that offers professional repinning. The Corbin C-6 keying kit allows a locksmith to repin virtually all Corbin and Russwin keyways.

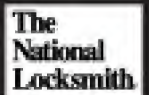
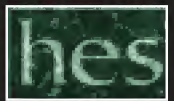
All pins are made of nickel silver and a molded plastic tray offers spill-proof design. A rekeying chart with plug followers and tweezers are also included.

Replacement pins are packaged in secure, spill-proof, plastic vials.



Circle 398 on Rapid Reply

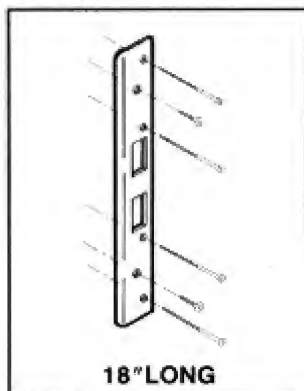




### Don-Jo Mfg's. New Armorstrike™

Don-Jo Mfg., Inc., introduces the Armorstrike™ and their new Full-Lip Security Strike Series.

Designed to repair, reinforce and strengthen damaged or worn door frames made of wood, Armorstrike features a full length curved lip which works with key-in-knob or deadbolt locks. The 13-gauge steel product is the full width of the door and sized to fit 1 3/8" and 1 3/4" frames.

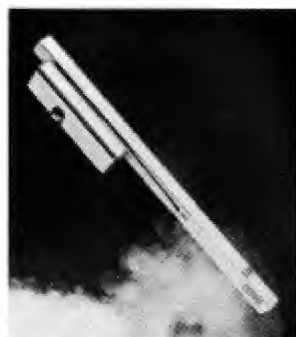


Circle 225 on Rapid Reply

### Dorma's Fire/Life Safety Closer

A new fire/life safety door closer is available from Dorma Door Controls Inc. The DC 140 surface applied door closer incorporated an integral photoelectric smoke detector while utilizing Dorma's DC 6600 Series Closer with adjustable backcheck.

The DC 140 can interface with existing fire/alarm control systems, or stand alone as a self-contained monitoring unit.

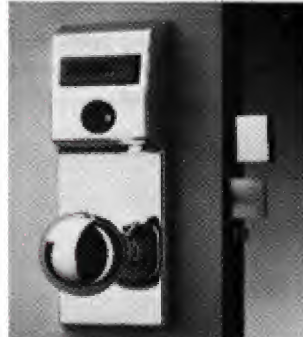


Circle 226 on Rapid Reply

### Falcon Lock's Gibraltar 2000

The Gibraltar 2000 system from Falcon Lock is an ideal system for commercial office buildings, condominiums, universities, or multi-unit installations. Each key operates as many (or as few) doors as desired with keys that cannot be duplicated but are reusable encoded keys. These keys can retract or extend deadbolts.

Seventy-nine levels of security are available to each lock.

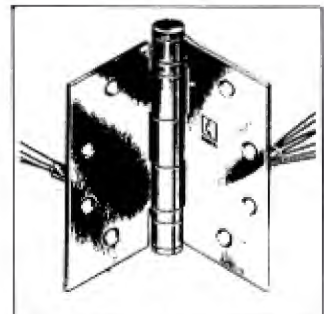


Circle 227 on Rapid Reply

### Hager Produces Electronic Hinges

In 1973 Hager Hinge Company received a patent for the electric hinge. Currently, Hager Manufactures a complete line of electric hinges with both exposed and concealed switches and concealed air transfer hinges. These units allow monitoring or openings and provide the full circuitry necessary for electric locks.

Hager offers five models of electric hinges and a single concealed air transfer hinge.

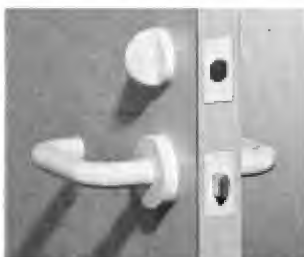


Circle 228 on Rapid Reply

### HEWI Expands Hardware Program

The HEWI door hardware program now includes U.L. approved lever handles and thumb-turns, a tubular passage latch and privacy deadbolt. The passage latch and lever handles are compatible with the latch and also mortise locks of several U.S. manufacturers. Lever handles are available in U-shaped or half-circular styles.

The tubular latch is designed with heavy springing for use with the steel core lever handles, providing retraction of the 1/2" bolt with 28 degree rotation of the hub.



Circle 229 on Rapid Reply

### International Door Closers' Catalog

International Door Closers, Inc. now offers a comprehensive storm and screen door hardware line with hydraulic and pneumatic door closers for all new and replacement work requirements. The catalog, complete with a product comparative table, features detailed illustrations and descriptions for your ordering convenience.

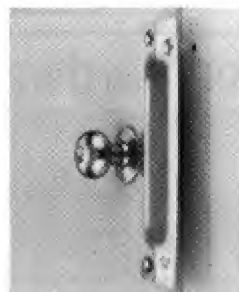


Circle 230 on Rapid Reply

### Door Lock Device From Latch Gard

The "Latch-Gard" is an easily-attached door lock security device manufactured by the Latch Gard Co., Inc. The tamper-resistant device is constructed from heavy 12-gauge plate steel and features a jamb pin to prevent prying the door open. Because the device installs with carriage bolts exposed on the inside, the lock covering cannot be loosened from the outside.

Only three holes are required for installation and the Latch-Gard can be used with cylindrical or mortise lock sets.

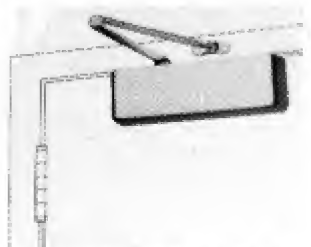


Circle 231 on Rapid Reply

### LCN Triples ANSI Standard

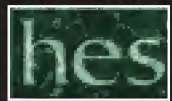
The Smoothee Long Term Cycle Test Program, demonstrating the dependable functionality of LCN Closers' door closer products continues. The three randomly selected "off-the-shelf" Smoothee door closers have passed 4,506,371 cycles, tripling the ANSI standard requirement.

The standard by which all door closers are measured, ANSI 156.4, requires a surface mounted, Grade 1 door closer to complete only 1.5 million operating cycles before wearing out or breaking.



Circle 232 on Rapid Reply

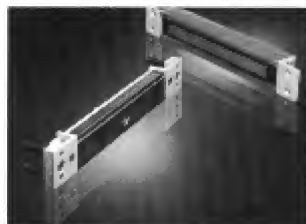




### New Shear Lock From Locknetics

The redesigned 271 Shear Lock from Locknetics Security Products incorporates a unique armature which simplifies installation and adjustment on glass, hollow metal, wood and narrow stile aluminum doors. With a holding force of 1600 lbs., the 271 draws .60 amps at 12 Volts, .30 amps at 24 Volts, and is available in AC or DC versions with built in spike suppression.

The 271's inherent fail-safe design makes the unit ideally suited for emergency egress doors.

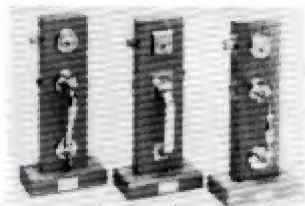


Circle 233 on Rapid Reply

### Lori Adds Entrance Handleset To Line

Lori Lock recently introduced a new, contemporary handleset design to its line of solid brass decorative hardware. With pitcher and colonial designs already marketed by Lori, this contemporary entrance set increases Lori's appeal.

All of Lori's decorative hardware is made in America, produced from solid forged brass, and is ideal for both new construction and retrofit applications. Each entrance set fits a standard door preparation for cylindrical locks with only three major components to the handleset.



Circle 234 on Rapid Reply

### Lindustries' Adaptor Aids Handicapped

An easy to install, lever handle that fits over most door knobs to make opening doors a simple push motion instead of twisting, which can be difficult for elderly or handicapped people, is available from Lindustries, Inc.

The Leveron® Door Knob Lever Adaptor is a sturdy plastic device that fits all standard knobs to make opening doors a push down motion. This patented lever adaptor attaches without removing the knob, using adhesives, or drilling holes.



Circle 235 on Rapid Reply

### Markar's Continuous Electric Hinges

Markar Products, Inc. now manufactures two models of electric continuous hinges. The exposed monitoring switch (prefix ES) can signal door position, activating alarms or monitoring devices. This is available in Markar's FM-100, FM-111, FM-200 and FM-300 model hinges.

The wires of the concealed electric hinge pass completely through any model of Markar's aluminum continuous hinges, permitting passage of current from jamb to door for operating electrical devices.



Circle 236 on Rapid Reply



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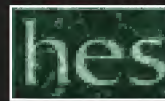
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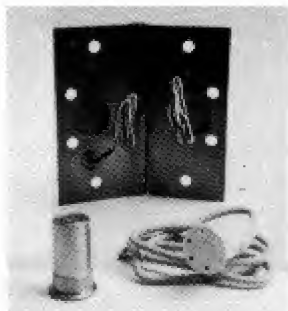




### McKinney Magnetic Monitoring Hinge

McKinney is marketing a patented U.L.-listed magnetic monitoring hinge with a concealed circuit that operates an electric strike on the lock set.

Model MM-CC looks like a regular full mortise hinge but has a reed switch in the jamb and a magnet in the door, not detectable by eye. They activate security signals, turn on lights, register on a remote monitor, and similar monitoring applications.



Circle 237 on Rapid Reply

### Medeco Introduces Embassy™ Lock

Medeco introduces the Embassy™ Lock, a new high security interchangeable core cylindrical lockset, ideal for commercial-grade, heavy-duty applications.

This lockset, which is complete with the Medeco Biaxial UL-listed cylinder, makes it possible for contract hardware consultants and architects to specify only one item when choosing door hardware rather than matching a lockset to a high security cylinder.

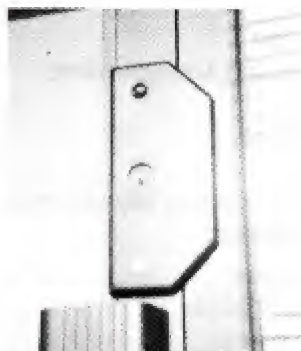


Circle 238 on Rapid Reply

### MBT Introduces Lock Guard Plate

MBT is pleased to introduce their new lock guard. It is useful for all store fronts that have aluminum glass doors. The guard protects the lock on the surface and also protects the deadbolt going into the jamb.

Designed to fit all flush-mounted doors the lock guard is made of heavy gauge metal and measures approximately 3½" x 8½". All installation hardware is furnished with each lock guard.



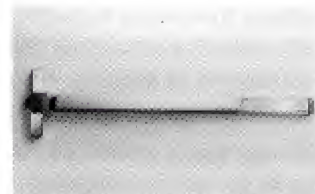
Circle 239 on Rapid Reply

### Monarch Introduces Exit Device Line

Monarch Hardware has begun production of a new product design. The 17 series, with its broad installation flexibility and variety of finishes, is an extensive line of ANSI-rated exit and panic devices.

A 17 series device will fit a wide range of applications and is ideal for narrow-stile applications. The new product is available in a number of finishes from bright brass to brushed aluminum.

The A-label, fire rated device is Monarch's sixth new product introduction in the past five years.



Circle 240 on Rapid Reply



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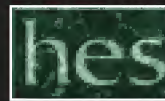
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### Peterzell Offers Knocker/Viewer

The new door knocker/viewer from The Peterzell company is crafted in ornate decorative styling. It includes a clear, built-in door viewer lens for wide angle viewing. It's finished in antique brass that is compatible with the color scheme of most door hardware. A nameplate is supplied that matches the decors of the knockers.

All mounting hardware is included, together with easy installation instructions. The knocker comes packaged in a gift box.

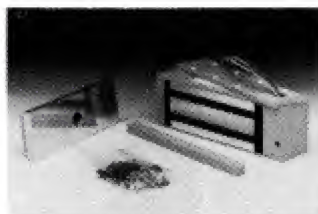


Circle 247 on Rapid Reply

### Reliable Security Systems' doorMag®

The doorMag® 1200 Series electro-magnetic locks incorporate a minimum tested holding strength of 1200 pounds.

The doorMag Series consists of the standard doorMag 1200 and the 1200F full feature models. Standard features of both models include LED lock status indication, on-board rectifier, inductive kickback protection, and virtual elimination of residual magnetism. Additionally, the 1200F unit offers integral magnetic bond sensing and full power sensing.



Circle 248 on Rapid Reply

### Rixson Brochure Highlights Exterior

Rixson-Firemark's 12-page, four-color brochure, "Door Hardware and Controls: Exterior Doors" explores a variety of design options possible with Rixson door hardware and controls.

The brochure features a variety of exterior door installations and demonstrates the uses of Rixson hardware in achieving door control without sacrificing aesthetic effect.

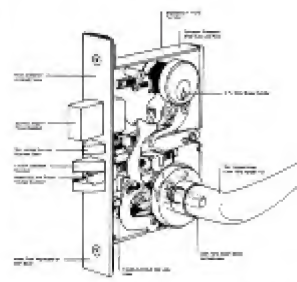


Circle 249 on Rapid Reply

### Schlage "L" 9000 Mortise Manual

Schlage Lock Company, has announced the availability of a technical service manual for the Schlage "L" 9000 series mortise lock. The "L" series mortise lock, flexible and easy to maintain, has one common lock case for knob, lever, and grip handle designs.

This new service manual contains a complete listing of parts and assemblies. Exploded views of each lock function are also provided with dot charts for easy reference.



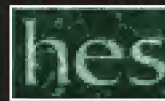
Circle 250 on Rapid Reply



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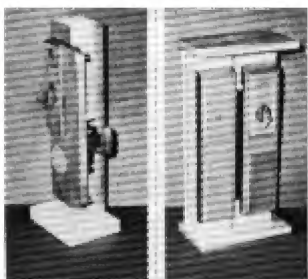


### Scotsman Security's DorGard™ Products

The DorGard™ Line from Scotsman Security Products offers aluminum narrow stile storefront door security in a variety of applications.

DorGard I fortifies rim or flush mounted mortise cylinders. DorGard II is a steel box which completely encases the mortise cylinder of a narrow stile aluminum door. An extension of that, DorGard III protects the latch area as well.

DorGard IV and V offer total protection for double and single narrow stile doors.



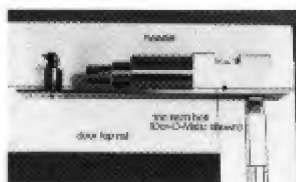
Circle 202 on Rapid Reply

### SDC's Electric Panic Device

The problem of providing access control, despite the necessity for panic exit devices, has been solved by Security Door Controls' PanicLok.

Compatible with Dor-O-Matic, Kawneer, Jackson and Adams Rite panic devices, the PanicLok is used against entry from the outside only, but the panic device is always operable for uninhibited egress.

Designed for openings with center hung doors, the PanicLok is concealed in the header, and its powerful solenoid makes it ideal for high frequency applications.



Circle 330 on Rapid Reply

### Stanley Hardware's Shimming Tips

Stanley Hardware announces the availability of a new Shimming Instructions brochure. This fully-illustrated, nine-page booklet describes some commonly encountered door conditions and the various shim placements that will solve door alignment problems. It includes using shims with wide throw, raised barrel and swing clear type hinges, and shows how their use corrects the bevel shift effect which causes inadequate door clearance.



Circle 203 on Rapid Reply

### TACO Introduces Rim-Mount Device

The Trans-Atlantic Company introduces its ED500 series rim-mounted exit device. Designed to complement the clean lines of the modern steel and wood door, this touch bar device is U.L. approved, meets template requirements for 161 cylindrical lock prep, is non-handed, has dead-latching and dogging features.

It comes in two styles: ED501 wrought steel in aluminum, duronodic and gold bronze finishes; and EDS551 all stainless steel model.



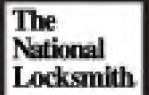
Circle 331 on Rapid Reply



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### Ultra's Catalog On Builder's Hardware

Ultra Hardware Products now has available their new 1988 full line catalog on builder's hardware.

This catalog contains a complete line of packaged builder's hardware products, aluminum building specialties and weatherstripping, home security hardware, door and window hardware, padlocks and a complete line of storm, screen and patio door hardware.



Circle 204 on Rapid Reply

### Von Duprin Adds Concealed Rod

Von Duprin, Inc. has added concealed vertical rod exit devices for wood doors to its 33 and 99 Series Touch Bar Device's. Designated Type 3347 WDC and 9947 WDC respectively. The new devices are designed to mount within single or double wood doors, combining the benefits of top and bottom latching with the clean lines of concealed mounting.



Circle 205 on Rapid Reply

### Weiser Lock Introduces Ebony

Weiser Lock introduces Ebony, the first in a series of futuristic, decorative finishes to be introduced in 1988. Ebony is an expression of classic architectural taste in a contemporary design.

Weiser's nickel-plated Ebony finish uses advanced plating technology to create Ebony's metallic, mirrored finish. Weiser Lock's overbaked enamel coating provides durable, lasting beauty.

Ebony elegance extends to a range of Weiser styles.

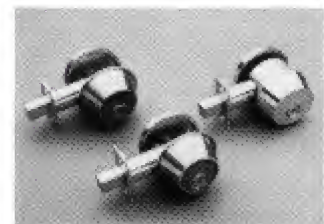


Circle 206 on Rapid Reply

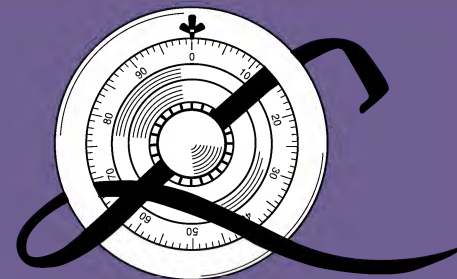
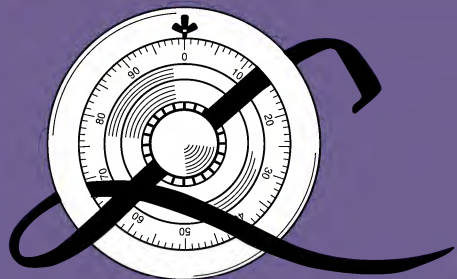
### Weslock's New Deadbolt Styles

Three new models of deadbolts, featuring contemporary styling in nine different finishes, will be introduced by Weslock. Each of the deadbolt models offers consumers a variety of quality security features, and together they provide retailers the product they need for effective good-better-best merchandising of deadbolts.

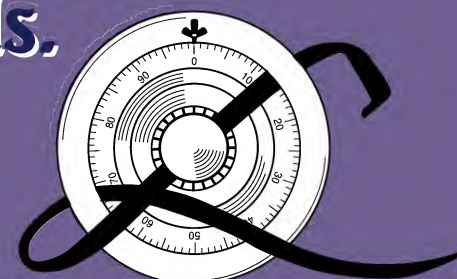
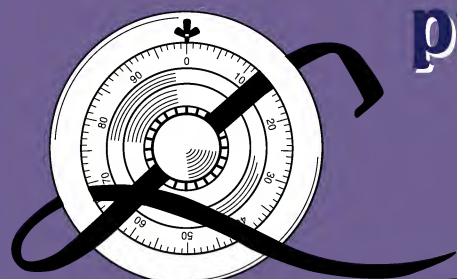
The three new deadbolt models are the Model 410 standard duty economy deadbolt, the Model 420 heavy-duty deadbolt, and the Model 430 extra heavy-duty deadbolt.



Circle 207 on Rapid Reply



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## Servicing An Antique

"You can imagine my delight when I removed the surface mounted deadbolt and found the entire lock assembly was hand crafted by a master blacksmith."

by Rick Jones

Some time ago a customer brought us a door, complete with hinges, lock-bolt, latch bar, door knocker, and iron ornaments, and asked us to make a key for the lock. Some research revealed the complete door was handmade, as was the lock assembly. The door was solid oak slabs fastened together with wood dowel pins and wedges (no nails). Further research, through the antique dealer who sold the door, discovered the door came from a castle in England dating back to the mid to late 1800's.

You can imagine my delight when I removed the surface mounted deadbolt from the door and found the entire lock assembly was hand crafted by a master blacksmith and the lock, though rusty and dusty was in tip top shape. Words cannot describe the feeling I felt as I carefully examined the craftsmanship of this 100 plus year old beauty. All parts were hand forged and cut from mild steel and brass. All assembly was done by bradding the forge welding. The outer case was a piece of hollowed out oak and the ornaments were riveted to the wood.

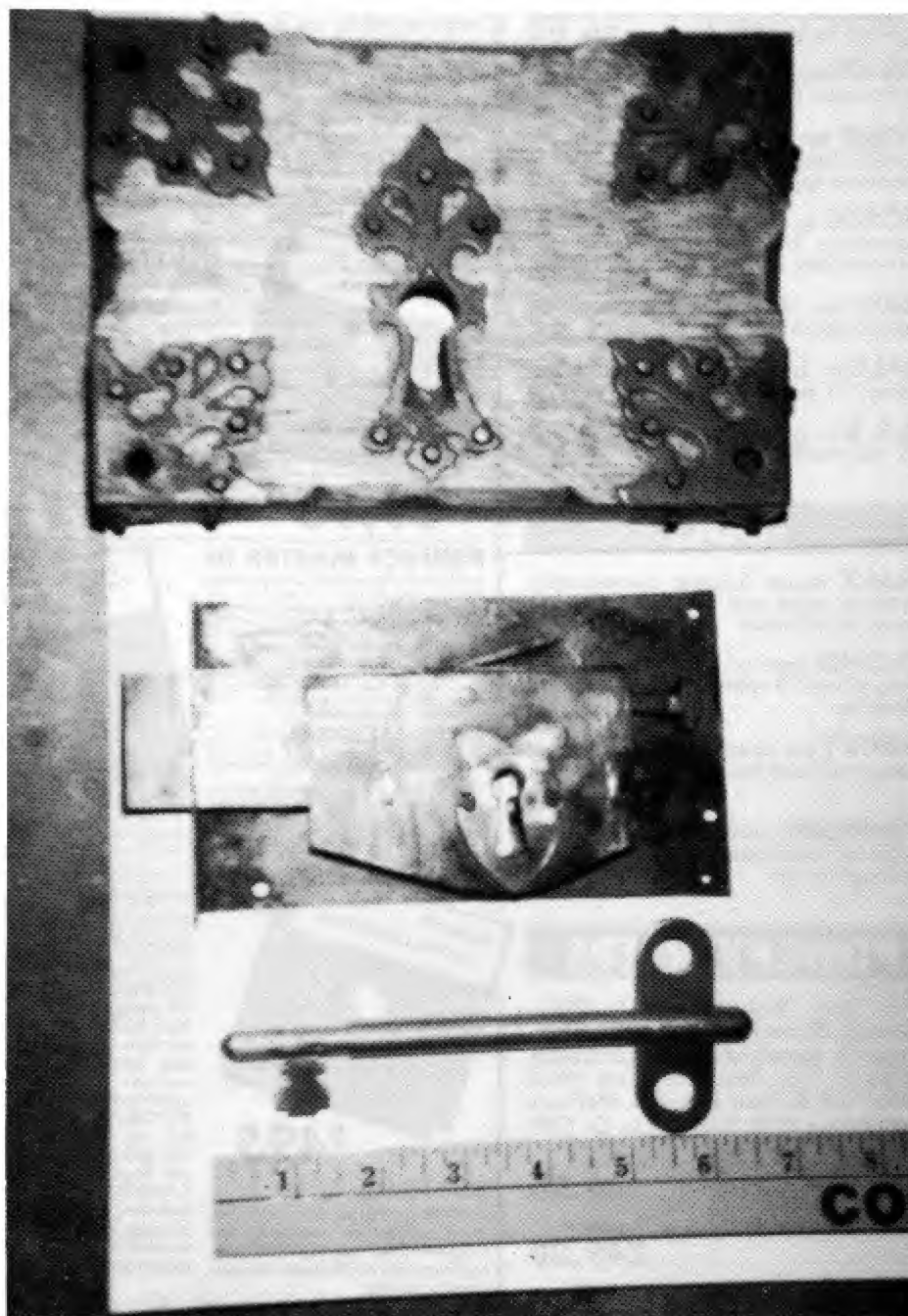
This was a single lever action dead-bolt with a 1" throw—that part was easy. The brass keyway guides were hand cut and forged together and incorporated a seven step stair step guide system. The key also had to be long enough to pass through the 3" thick door from the outside.

With the help of a machinist and approximately five hours of hard work, we produced the key shown in the photograph. For authenticity's sake, we did not weld the bit or the bow to the 5/16" brass stock. Instead, we milled a slot for the bit and bow and once they were inserted, we drilled holes and used bradded brass pins to secure them to the stock.

It felt good to feel this brute of a deadbolt "kaw-thunk" when I retracted the bolt with this new key.

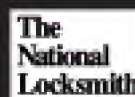
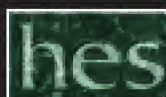
All in all, I felt very fortunate to have had the opportunity to work on this piece of history. Not to mention we

have a very happy customer who was delighted to pay a handsome sum for this key. ■



Handmade lock assembly from antique door with newly heated key.



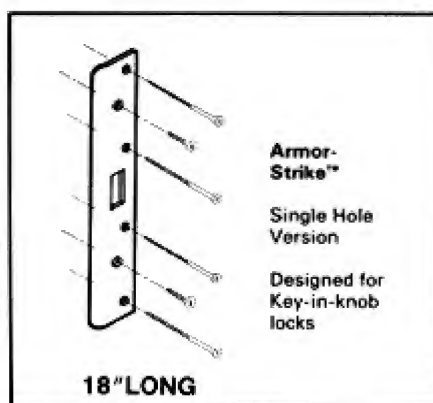


## Don-Jo Door Products

"All of the strikes in this line are designed to increase the strength of the door frame, cover up old strike applications, or repair damage."

Don-Jo Mfg. of Leominster, MA a maker of accessory products for doors and frames, recently announced the addition of a new product series known as the Full Lip Security Strike Series. The products in this series are Armor-Strike™, Series 12 Strike™, and Series 8 Strike™. All of these strikes are designed to increase the strength of the door frame, cover up old strike applications, or repair frame damage.

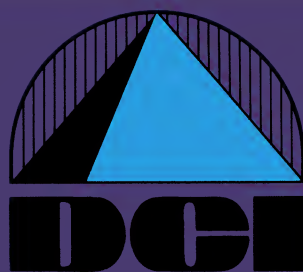
The Armor Strike is eighteen inches long and according to the manufacturer is designed to *repair* moderately damaged door frames. It is common for the "average" soft pine frame used in today's construction to offer little or



no support against forced entry because the design of the frame locates the supporting 2" x 4" in an *offset* posi-

tion and is of little use. When force is applied, it results in a frame fracture, often with damage that eighteen inches of metal will cover.

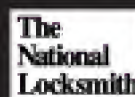
The design of the Full Lip Security Series offers several unique features. The design calls for the strike to fit the entire width of the frame with "flat metal" and an extended full length curved lip which allows for use with either key-in-knob locks or deadbolt locks. These products are "sized" to fit the frame and are available in 1 3/8" and 1 1/4" widths. Six fasteners are provided, two 1" centering screws, and for increased frame strength, the "support" is provided by the four wood screws



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that fit into strategically located screw holes. These screw holes are found very close to the door stop are designed to penetrate into the strongest part of the 2" x 4" support for maximum effect.

Because of the various locks used in today's marketplace, there are several strike designs in the Armor Strike Series. The "standard" offers a single center hole to fit most key-in-knob and deadbolt locks. A "mortise lock" version offers a "universal" center hole designed to fit most residential mortise lock sets. Two "double hole" styles are also available, one uniquely designed to accommodate both 3 1/2" and 4" centered double locks and a 6" centered version for use when applying a deadbolt to an existing key-in-knob application.

The entire Full-Lip Series has a designer touch also. The manufacturer offers these strikes in the traditional steel brass-plated and silver-coated finishes and in white coated finish. The white finish is offered to complement the many white prime doors offered by the residential door manufacturers. The white color of the strike "disappears" into the frame. The finish is a dry powder baked on epoxy found on many types of hardware today, is durable, and may be painted to match color decors.

According to the manufacturer, Series 12 Strikes™ were developed for the retro-fit market and used to cover-up old strike holes, aged wood, and damaged frame edges. Series 12 Strikes include all of the features and styles of the Armor Strike™ series, but all in 12" length. This strike is a great complement to all 9" "wrap-a-round" plates available from various manufacturers and is designed to accommodate all double hole "wrap-a-rounds."

This series is designed for new installations. This comes in 8" lengths but with all the power features of both Armor Strike™ and Series 12 Strike™, and is available in the same finishes. Series 8 Strikes will work with deadbolt and key-in-knob locks and also includes the mortise lock version with a "universal" center hole that will accommodate residential mortise lock sets.

The entire Full Lip Strike Series represents a new approach to frame security. It offers solutions to common problems while creating new opportunities as well.

For more information contact: Don-Jo Mfg., Inc., P.O. Box 62, Leominster, MA 01453, (617) 534-1115. ■



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## Inter-Lockit From Aable

"The device is easy to apply, universal enough to be used in almost any rim or mortise application and is an effective deterrent to cylinder wrenching or attack."



by Robert Sieveking

A new emphasis has been placed on the narrow stile aluminum door. With the increased use of extruded aluminum architectural door units, comes the need for innovative new products to prevent forced entry. The Inter-Lockit cylinder protector from Aable Locksmiths is one product that deserves closer inspection.

At first glance, the simplicity of the Inter-Lockit cylinder guard may be

deceiving. On further examination, we find that simplicity is its major advantage. The device is easy to apply, universal enough to be used in almost any rim or mortise lock application and effective as a deterrent to cylinder wrenching, pulling and drilling attacks.

Shortly after receiving some samples for review, I had an opportunity to install one. Quality Quick, a small print shop, called to say that someone had tried to break into the store. The outside cylinder was scarred and showed evidence of being wrenched. Luckily the break-in attempt was not successful, but it was obvious that the burglar had found a weakness in the store's security. A cylinder guard on the door

would have prevented this type of attack.

After a short discussion with the store owner on the need for a cylinder guard, and the advantages of the Inter-Lockit, a price was agreed upon and the installation was begun.

I was surprised at the simplicity of the installation. Using the cardboard template supplied with the cylinder guard, the location for the mounting screw was center punched on the door. A 5/16" hole was drilled through the door at the point established in step one. (See photograph 1.) The cylinder guard was slid over the lock cylinder, and the 5/16" screw was screwed through the drilled hole to complete

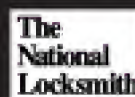
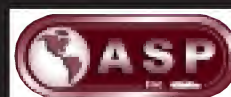


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1. 5/16" hole drilled at point on template.

the installation. (See photograph 2.) The cylinder guard interlocks with the head of the lock cylinder and is actually held to the door by the lock. (See illustration 3.) By tightening the inside cylinder and mounting screw, the



2. Screw inserted to complete installation.

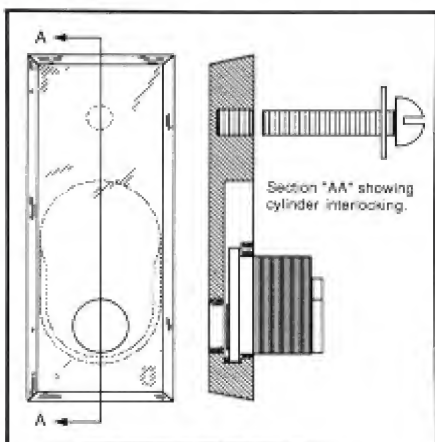
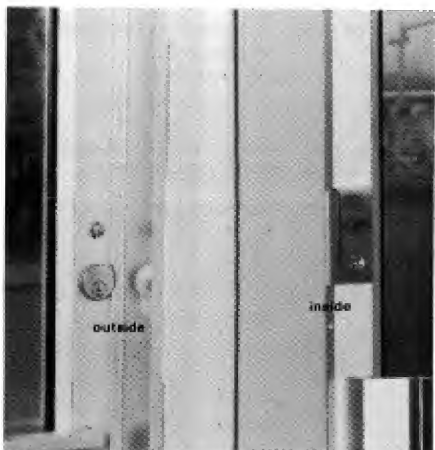


Illustration 3



4. Completed installation.

cylinder guard was pulled tight against the outside of the door. Photograph four shows the completed job. The actual installation, took only about fifteen minutes.

The cylinder guard is machined from a solid block of tool steel, is hardened to resist drilling attacks, and comes in three finishes; bright chrome, duro-donic bronze and bright brass. It can be used with rim or cylinders and can be applied to wood doors with equal success.

After installing the cylinder guard, I found that the key I was using would not enter the keyway far enough to

operate the lock. The bottom shoulder of the key had to be modified to allow it to completely enter and operate the lock. Testing the Inter-Lockit with other cylinders, I found that only keys with wide bottom shoulders needed to be modified. At first, this seemed to be a disadvantage, until I considered the fact that a key duplicated by someone unfamiliar with the application would not work. This might prove to be a simple means of preventing unauthorized key duplication.

Contact: Aable Locksmiths, 91-10 Liberty Ave., Ozone Park, NY 11417, (718) 847-1377. ■



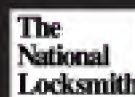
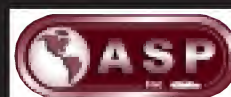
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## The DorGard From Scotsman

"There are five different models of the DorGard, each with its own special features and applications. Each is designed to overcome a special problem."

by Bob Sieveking

This month I have the privilege of reviewing the Scotsman line of high security hardware for narrow stile aluminum doors. My first impression was that this line of cylinder guards and door/jamb reinforcers was the most extensive and complete system of reinforcers I had seen. There are five different models of the "DorGard," each with its own special features and applications. Because each is designed to overcome a special problem and all are somewhat unique in the marketplace, this article will try to identify each and let you, the reader, decide which is best suited for the security problems you encounter in the field.

Some special features shared by all the DorGard products are: The square steel cover plate that covers the lock cylinder is made from heat treated drill resistant 17-4 stainless steel. This cover plate protects the lock cylinder from most tool attacks, such as drilling and prying. The edges are angled to resist hammer attacks. The rotating steel plug protector is made from case hardened steel. The plug protector revolves freely in the cover plate to prevent drilling and pulling of the lock plug. The latch protector plate (DorGard III) and lock bodies (DorGard IV & V) are made of 304 stainless steel. The ribs on the back of the latch protector plate increase the strength of the

plate to resist prying and bending. The strength of this plate far exceeds the strength of the extruded aluminum door stile that it protects. This latch plate also contains three hardened steel pins that engage the jamb to prevent spreading of the jamb away from the door. All DorGard products are non-handed. This means that the protectors can be properly installed on either left or right hand outswinging doors.

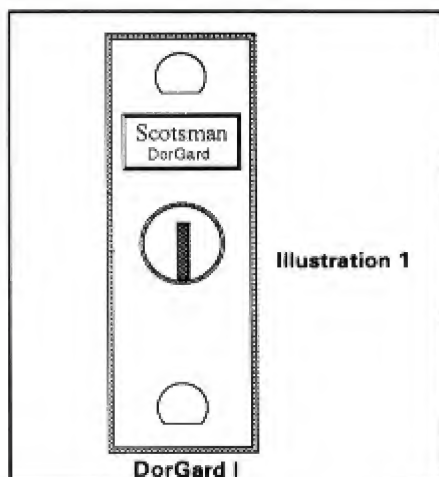
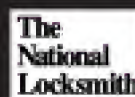
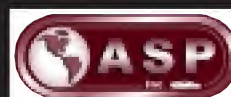
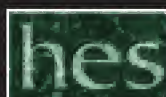
The "DorGard I" (see illustration 1) is designed specifically to protect rim and flush mounted mortise cylinders. The 5/16" thick solid steel plate is attached to the door by means of two chrome plated case hardened steel sex bolts. The hardened steel plate and

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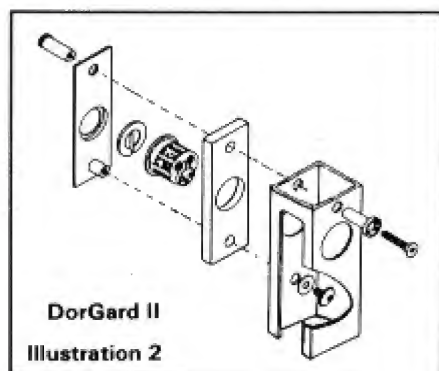
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rotating case hardened plug protector form a protective shield for the lock cylinder and the area of the door immediately surrounding it. The attachment bolts are  $4\frac{3}{8}$ " apart, which allows ample space for most rim mounted auxiliary locks. DorGard I is available in chrome or brass finish.

The "DorGard II" (see illustration 2) is designed to protect the mortise cylinders commonly found on thin stile aluminum doors. The lock cylinder, the point of entry of the key, which allows actuation of the lock, is a necessary but vulnerable part of most locking systems. Most locks of this type are comprised by wrenching or prying the cylinder from the door and actuating the lock mechanism with a screwdriver or awl. The DorGard encases the lock cylinder in a block of steel and shields the cylinder and plug with drill resistant hardened stainless steel, preventing this type of attack. The outer faceplate is hardened 17-4 stainless, to resist drilling of the lock cylinder. The plug is further protected by a rotating case hardened disk. This unit would be best suited to protect in-swinging doors.



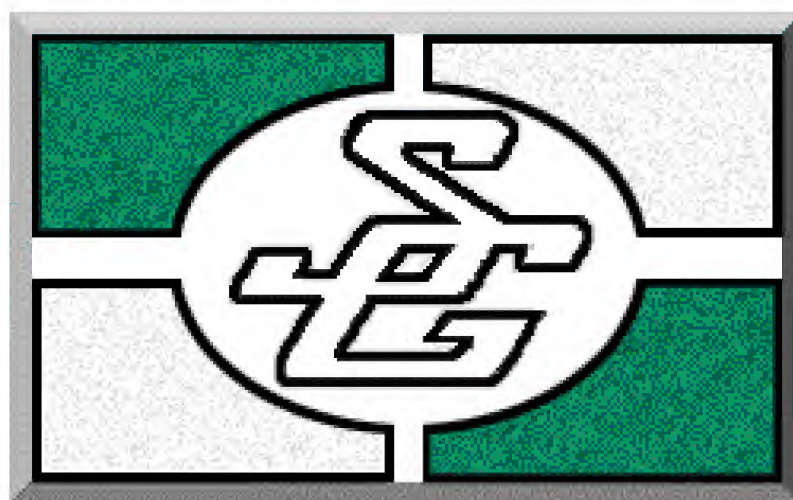
Installation of the DorGard II requires no special jigs or fixtures. The steel backplate is used as a drill guide. With the cylinder installed in the door, the backplate is clamped to the door over the cylinder and two  $25/64$ " holes

are drilled in the door from the outside. Illustration two shows the two mounting holes. The upper hole passes through the door. The lower hole, for the pivot screw, is only drilled through the outside of the stile.

After the holes have been properly drilled, the lock is removed from the door to allow the pivot screw to be installed. (All mounting screws and sex bolts for the Scotsman DorGard hardware use a standard  $5/32$ " hex key.) The pivot screw is a Nylock fastener. A Nylon pellet in the screw thread acts as a lock, to prevent the

screw from loosening. After installing the pivot screw, the lock and lock cylinders are assembled in the door.

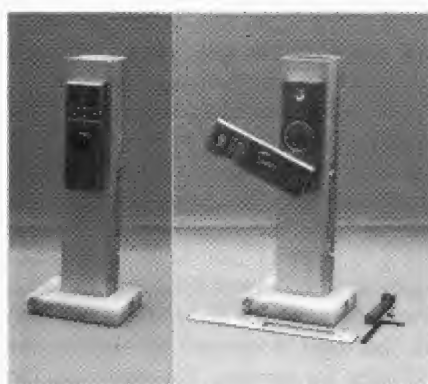
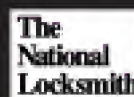
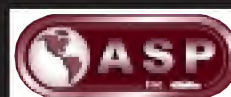
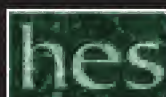
The installation is completed by the installation of the sex bolt at the top of the DorGard. The sex bolts on all DorGard cylinder protectors have a unique "D" head, to prevent them from being loosened from the outside. Photograph three shows the DorGard as it would appear in a door. The DorGard on the right is opened to remove the cylinder for service. By removing the sex bolt, the outer shield can be pivoted aside, allowing the lock cylinder to be serviced.



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3. DorGard II as attached on a door.

The "DorGard III" is an extension of the "DorGard II." The only difference is that the back plate is replaced with a latch guard, which protects the lock bolt and interlocks with the jamb. Hardened steel pins in the latch guard enter holes in the jamb to prevent the door from being pried away from the jamb. The strength of the latch protector, and its ability to resist prying should stop even the most persistent burglar. The latch protector completely conceals the bolt and protects the jamb from a ripping attack. By destroying or ripping the jamb, the door

is allowed to open without retracting the lock bolt. One thing you will begin to notice as you work with the DorGard hardware, is the weight of the parts. The DorGard III is a hefty two pounds of hardened stainless steel. It is available in dark bronze and polished stainless finish. This unit is best suited for outswinging doors.

Installation of the DorGard III is very much like installation of the DorGard II. As the back plate was used as a drilling template in the previous installation, the latch protector is used in this installation. The top and bottom holes are drilled through the door and the two center holes are drilled through the outside only. After removing the cylinder and lock assembly, the Nylock pivot screw and emblem screw attach the plate to the door. The lock and lock cylinders are installed in the door and the lower sex bolt is installed and tightened.

Installation of the DorGard is completed with the installation of the plug protector disc and upper sex bolt. (See photograph 4.) All that remains is drill-



4. DorGard III with plug protector disc and upper sex bolt.

ing the holes in the jamb to accept the interlocking pins of the latch protector. Location of the pin holes is simplified by the use of special transfer punches provided, which fit over the latch plate pins. When the door closes on the jamb it punches little prick marks on the jamb to locate the holes. If a height mismatch exists between the door and jamb, 1/16" and 1/8" spacers are available, in the same finish as the DorGard, which allow the latch protector to be raised away from the door. This will allow the door to close properly. By removing the upper sex bolt, the face plate can be pivoted aside, allowing the cylinder to be removed for service.

The "DorGards IV and V" are unique in their application and function.

*Continued on page 104*

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## Volvo Ignition Techniques

"The new 1988 Volvo 760 series automobile keys and locks have a radically new design. At first it seemed there was no logical way to take the cylinder apart."

by Steve Spiwak

The other day I received a call from a locksmith who had a customer who had lost the keys to his 1988 Volvo 760 GLE. Initially I said to the locksmith that making a key for a Volvo ignition should provide no problem whatsoever. Boy was I wrong!

The new 1988 Volvo 760 series automobile keys and locks have a radically new design. And while this design is not revolutionary in terms of other automakers, it is a significant departure from any existing design and therefore more than worthy of our attention. Perhaps most importantly, is the continuing indication by the automobile manufacturers that the

high security mode will be the only way that locks and keys will appear in the near future!

The customer brought the ignition cylinder itself into my friend's shop. From the outset it appeared that the real difficulty in making a key would be the physical breakdown of the ignition cylinder, rather than the ability to decode the tumblers and make a key. This was not to be the case.

Upon first examination, it seemed that there was no way in which to take apart the ignition cylinder. The only logical possibility seemed to be face cap removal. I found that the face cap could be carefully removed, and later reinstalled (see photograph 1).



1. Face cap from high security Volvo ignition can be carefully removed.

Once the face cap was removed a c-shaped snap ring came into view. The ring was inserted in a deep groove which runs parallel to the rim of the

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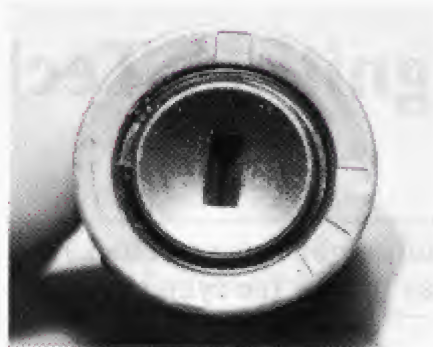
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lock (see photograph 2). Using a small flat blade screwdriver and a hardened dental tool pick, I was able to remove the c-shaped snap ring (see photograph 3).

Once the c-shaped snap ring was removed, I was able to dislodge the key alignment cap (see photograph 4). I was next required to carefully manipulate the dental tool in such a way as to remove the flat retaining washer (see photograph 5). This flat retaining washer is used solely to secure the cylinder plug itself. I next removed the plug from the rear of the cylinder hous-



2. Front view of snap ring in place in deep groove inside lip of cylinder housing.



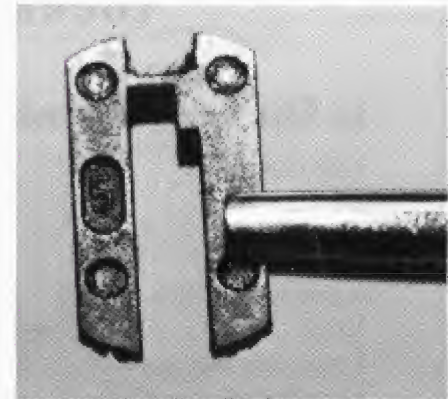
3. Snap ring removed from ignition cylinder.



4. Alignment cap removed from ignition cylinder.



5. Removal of the flat retaining washer.



6. Volvo split scissors action tumbler.

ing without difficulty.

Once the plug was free, I could examine the tumblers. The tumblers themselves were indeed unusual (see photograph 6). Although this plug and the tumblers can be identified as a 4-track system, the tumblers were far from the standard split tumbler variety. There are 4 tumblers per plane. There are two planes. Yielding a total of 8 tumblers.

The tumblers utilized scissor type action, which is dependent upon two

*Continued on page 105*

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## Opening Diebold's 175-70

"Banks, savings and loans, and hotels will benefit to a great degree by the use of this particular lock; the main area of benefit being money."

by Henry Snowden

In January's issue of *The National Locksmith* many of you may have read a letter I submitted to "Shop Talk" responding to a reader's questions concerning Diebold safe deposit box lock, 175-70. As a result an invitation to further elaborate on this lock was extended to me.

Banks, savings and loans, and hotels will benefit to a greater degree by the use of this particular lock; the main areas of benefit being money. There are, of course, other very real pluses such as quicker shipping, great versatility, convenience, etc., but everything eventually equates to money. For openers, the replacement cost is rela-

tively low. Add to this the fact that it is double changeable (both renter as well as guard side) and we find ourselves on the road to even greater savings.

To gain a little more insight as to how these savings may be realized, let us look at some service situations and see how the 175-70 easily accommodates their cost effective completion:

1) When a box is surrendered, the combination can be changed in under a minute allowing re-rental almost immediately. 2) If the security of issued keys becomes questionable, the same procedure can return peace of mind and security to the renter. 3) Multiple box renters can receive keyed alike

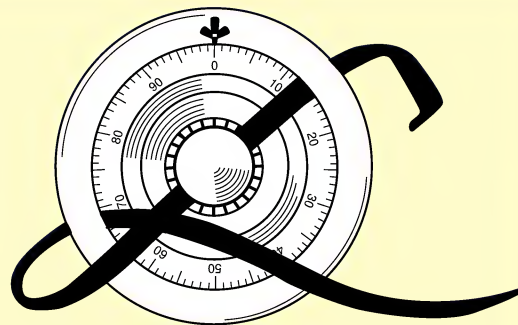
convenience (if allowed). 4) Any number of boxes may be set to operate by a different guard key(s) and back again (i.e., for internal use or where more sensitive items must be controlled by another department or individual). 5) When safe deposit box sections are initially ordered, as well as all subsequent additions, they need not be set to any particular guard at the factory. They are simply shipped from stock, set in a neutral position and changed to the institution's guard key as they are committed.

Not once in any of these scenarios was an outside service entity needed to complete the work. This could go on all



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day and not one dime would be spent, other than the staffs' normal salary. This would eliminate box rotation, set up time and charges at the factory, and appointments. Convenience, versatility, and freedom from outside service personnel equals "money in the bank" (pun intended). Good for them—bad for you? Well, not exactly. The inevitable lost key, court order, etc., will be omnipresent. You will be called!

But first let us back up a little and look at the changing procedure that makes all this possible. From Diebold's operating instructions:

**Unlocking the lock:** 1) Insert the guard key into the small nose of the lock. Turn the key until it comes to a stop. 2) Insert the customer key in the large nose of the lock. Turn the key until it comes to a stop.

**Changing the customer key:** 1) Unlock the lock as described and open the door so that the back of the lock is accessible. Leave both keys in the lock in the unlocked position. 2) Insert Diebold change tool in the special hex screw in the back of the lock. Make sure the tool is inserted in the hex screw *closest* to the bolt. (See illustration 1.) 3) Turn the change tool

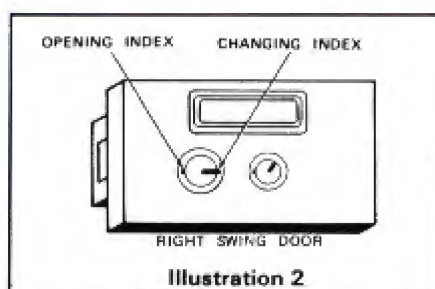


Illustration 2

customer key to extend the bolt *with the door open*. Try the lock several times before closing the door.

**Changing the guard key:** 1) Unlock the lock as described before and open

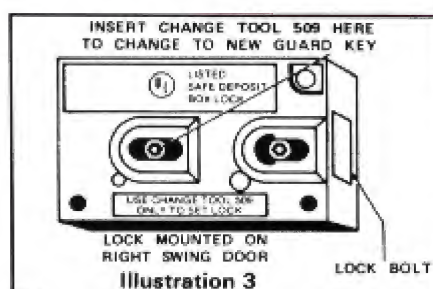


Illustration 3

the door so that the back of the lock is accessible. Leave both keys in the lock in the unlocked position. 2) Insert the Diebold change tool in the special hex screw in the back of the lock. Make

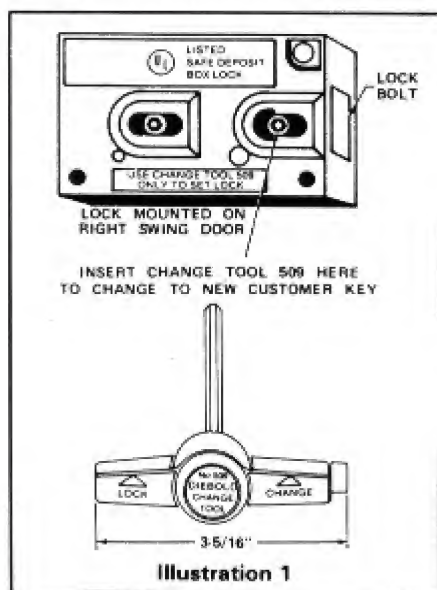


Illustration 1

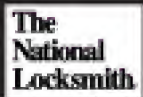
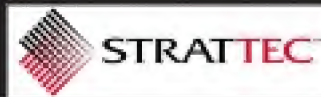
three complete turns *counterclockwise* and remove tool. 4) From the front of the lock, continue to rotate the customer key in the same direction as before until it comes to a stop at the change index. (See illustration 2.) Remove the key. 5) Insert a new customer key (at the change index) and turn in the opposite direction until it stops. 6) Insert the change tool in the same hex screw as before and turn *clockwise* until two distinct clicks are heard. 7) Remove the change tool, continue turning the new



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sure the tool is inserted in the hex screw *furthest* from the bolt. (See illustration 3.) 3) Turn the change tool three complete turns *counterclockwise* and remove the tool. 4) Turn guard key only to the normal removal position. Remove guard key. 5) Insert new guard key and rotate until it comes to a stop. 6) Rotate customer key until it stops to extend the bolt. 7) Insert change tool in same hex screw as before (furthest from the bolt) and turn *clockwise* until two distinct clicks are heard. 8) Remove change tool and operate lock several times with the door open.

That is all there is to it. Now let us try and get a locksmith's view. Use illustration four as a guide for parts identification as well as to visualize this procedure.

There are seven identical fences for the renter side and seven identical fences for the guard side. They stack one on another over two guide posts and are held in place, or allowed to float, by the hex screw and a backing plate.

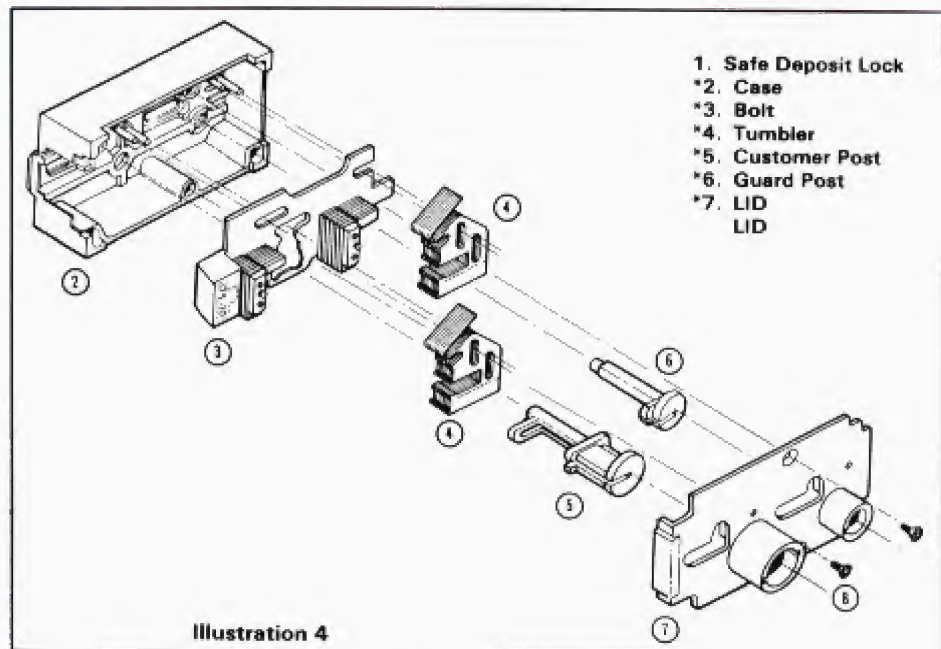


Illustration 4

Their location on the bolt is not unusual; however, the fact that there are fourteen total is. These fences are also

the center of the change process as we will soon see. Of equal importance are the levers. There are seven identical levers for the renter side and seven identical levers for the guard side.

As in all locks of this variety, the levers must be raised to a point at which the fence, or in this case fences, are allowed to enter the gate of each lever. In this lock the fences are set at varying positions. With the proper key in the lock the cuts of the key will raise each lever and therefore its gate to the proper level to accept its own corresponding fence. The bolt may now be retracted.

With the lock in this condition, let us change the combination using the procedure previously described. At this point the change tool is inserted in the special hex screw and turned counterclockwise thereby loosening the fence stack and allowing it to float. With this screw loosened, it (the screw) will also now clear an obstruction in the lock body itself enabling the key to be turned further to the changing index.

When we insert the new key and turn it back toward the locked position, two things will happen. First, the key will come to a stop. This is because the screw is still loose and will hit the lock body on this return direction also. Secondly, the cuts of the new key will raise their corresponding lever to a new position. Since the fence stack is still loose, this action will force each fence to a new position also.

Remember that at this point they are still in the gates of the levers. The hex screw is now tightened securing the



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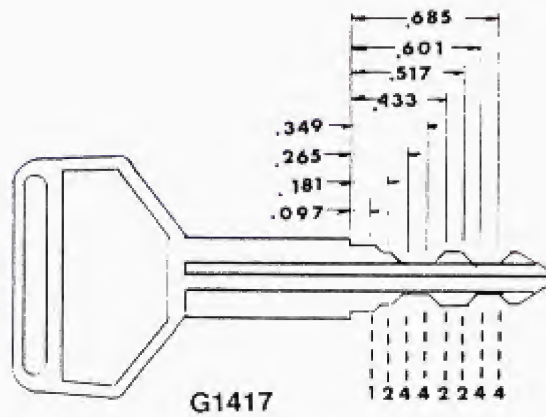


# Codes For Toyota Corolla

1988+

G001-G2000

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This new code series is used on the 1988 Toyota Corolla. Toyota has gone to 8 spaces to reinforce anti-theft function and correspond to the increasing number of key code and cylinders needed. These Codes can be found in the HFCB-3 Volume 1 & 2 released by HPC Inc.

## DEPTHS

0 -	5 -
1 - 0.324	6 -
2 - 0.297	7 -
3 - 0.270	8 -
4 - 0.243	9 -

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02 22113232  
03 43112443  
04 11221244  
05 21112324  
06 33422231  
07 31133232  
08 31132434  
09 32242343  
10 12243123  
  
11 44421224  
12 32212312  
13 32234443  
14 43211311  
15 12442131  
16 32423312  
17 24342224  
18 31324231  
19 31233224  
20 43423223  
  
21 13211242  
22 31232231  
23 43231242  
24 13432432  
25 12444222

26 32113213  
27 21224431  
28 11221323  
29 13442323  
30 23234233  
31 43422211  
32 44243134  
33 42432211  
34 12334331  
35 21234242  
36 43124313  
37 31332221  
38 21234332  
39 22123344  
40 43422421  
  
41 32133223  
42 21133322  
43 12223331  
44 32342132  
45 42112321  
46 13443121  
47 12322121  
48 22311232  
49 32442244  
50 31332442

## 0051

51 21333442  
52 42344311  
53 23313324  
54 21233443  
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56 22111344  
57 23443133  
58 23132112  
59 42243421  
60 42334431  
  
61 43223124  
62 33213244  
63 42223431  
64 22213324  
65 31113222  
66 31211342  
67 12442421  
68 32331224  
69 32334442  
70 23422244  
  
71 21342133  
72 34442122  
73 32113323  
74 31213232  
75 11122243

76 23432111  
77 44222332  
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79 44313124  
80 22421334  
  
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99 23343423  
00 11134433

## 0101

01 33134234  
02 44322424  
03 24322324  
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20 11122244  
  
21 22112312  
22 21323111  
23 42442243  
24 24332224  
25 43124211

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### 0151

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27 43433442  
28 33113442  
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31 44312134  
32 32332243  
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00 42213213

### 0201

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45 42433422  
46 32311343  
47 12322431  
48 12233322  
49 44222443  
50 43212134



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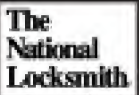
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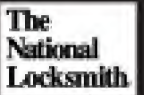
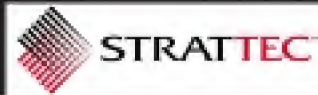
## G1-2000 TOYOTA

### Keyblanks:

HPC/Silca TOY38R  
 ILCO N/A  
 TAYLOR X174

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52 43113312	02 21121132	52 33234231	02 11124321	52 44244332
53 31344344	03 12424322	53 22131243	03 31233422	53 32122312
54 22132132	04 33312432	54 13433423	04 32244224	54 42112213
55 13334223	05 42324433	55 42232342	05 43213132	55 22113231
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58 23443431	08 31233424	58 33213324	08 23444333	58 21323223
59 42232231	09 42134212	59 33113211	09 22124312	59 31124424
60 11134244	10 43233442	60 32123334	10 32213234	60 22324424
61 31324221	11 21312334	61 43233124	11 33231244	61 12312331
62 33221334	12 42422424	62 33443222	12 31223123	62 31342311
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64 44333111	14 42323122	64 33124432	14 42312211	64 31221311
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66 11244432	16 44312234	66 42344221	16 32432132	66 21324342
67 22121124	17 44243223	67 12423342	17 32113433	67 33222113
68 11213313	18 23132111	68 43233443	18 11312433	68 33112332
69 44334334	19 13313222	69 21133224	19 44231344	69 33312112
70 33122324	20 24312323	70 32111224	20 12331334	70 22123132
71 21224211	21 32332121	71 23432231	21 23432434	71 33223123
72 12431213	22 42443223	72 12444343	22 31113244	72 22234342
73 12334213	23 31234221	73 31334432	23 24442123	73 31242312
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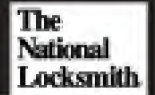


## G1-2000 TOYOTA

Keyblanks:  
 HPC/Silca TOY38R  
 ILCO N/A  
 TAYLOR X174

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52 32244212	02 43233131	52 13443324	02 21333113	52 12324342
53 33132211	03 31121342	53 33244223	03 12423331	53 43332243
54 21244343	04 32233244	54 11123133	04 12422443	54 13422444
55 43323224	05 11223224	55 32113232	05 33244344	55 13342432
56 43111234	06 11134221	56 33242131	06 21134433	56 33233121
57 32113123	07 31311332	57 21133134	07 13421224	57 43443324
58 42334432	08 32434213	58 43221344	08 21133211	58 13342421
59 22324321	09 33122424	59 24342232	09 24422131	59 32424321
60 44342232	10 33211312	60 31243123	10 32433424	60 32133231
61 33243124	11 33133421	61 32123311	11 32223312	61 33113324
62 31243421	12 22111324	62 42243233	12 21322332	62 42124324
63 44332244	13 32213313	63 43123234	13 32434423	63 42421311
64 31342132	14 24322442	64 42443131	14 23343122	64 32423124
65 32423422	15 43134231	65 11332243	15 44331234	65 42313322
66 32243233	16 44332211	66 43312444	16 22313113	66 43244212
67 32234334	17 11222344	67 43224313	17 42112132	67 42244321
68 43223344	18 33122331	68 42124342	18 23133122	68 33242431
69 24334222	19 42442433	69 32433431	19 13343321	69 13123112
70 42342121	20 42322423	70 31121134	20 13442443	70 33434424
71 21121334	21 22331242	71 32344211	21 12242312	71 43211224
72 23424224	22 22331242	72 43331211	22 21233421	72 13122424
73 43422124	23 31243224	73 44331242	23 21122311	73 31233243
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76 44333424	26 32112342	76 21132422	26 44344333	76 33312442
77 44431221	27 12444221	77 32331121	27 11123123	77 42342112
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80 32113444	30 43213233	80 32243223	30 21113444	80 23423443
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82 43133421	32 32213124	82 42124323	32 11123134	82 43422234
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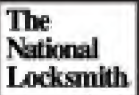


## G1-2000 TOYOTA

Keyblanks:  
 HPC/Silca TOY38R  
 ILCO N/A  
 TAYLOR X174

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03 31324312	53 33122111	03 32443422	53 42324321	03 31232334
04 11324334	54 44242242	04 42334232	54 13431242	04 31334443
05 12424432	55 43112344	05 42423442	55 11332322	05 44232334
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08 11123244	58 12234442	08 42213432	58 43133422	08 32213332
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10 42332434	60 42442431	10 31233423	60 22311323	10 31242132
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12 42431134	62 31231132	12 44224223	62 43324324	12 12424312
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19 44312221	69 21134331	19 32422443	69 44311242	19 31224223
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21 12313221	71 43432133	21 44432331	71 42334242	21 23422132
22 31123312	72 42312311	22 43123432	72 11122134	22 44321323
23 13322124	73 42223312	23 43223133	73 23342231	23 21322334
24 33211134	74 42221312	24 23443343	74 13422344	24 13312331
25 43244421	75 21331231	25 22424423	75 32122324	25 42323111
26 22211342	76 42213223	26 43234233	76 32442111	26 42313343
27 23343111	77 21113344	27 43334244	77 42332431	27 43243344
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29 12432321	79 44332242	29 44224233	79 33231242	29 13442343
30 32312342	80 13442324	30 42244212	80 32213344	30 21243244
31 33223221	81 11312331	31 32134234	81 13432422	31 11243332
32 43121243	82 43134234	32 42213221	82 32234221	32 32233112
33 21244233	83 22332231	33 23442231	83 42221131	33 44421323
34 24442324	84 42323323	34 21331211	84 32312334	34 44421322
35 43433443	85 22234432	35 23343112	85 21213321	35 31211231
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37 12434431	87 22313112	37 33211132	87 42432232	37 21313322
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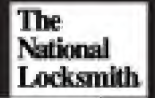
## G1-2000 TOYOTA

### Keyblanks:

HPC/Silca TOY38R  
 ILCO N/A  
 TAYLOR X174

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52 43342232	02 43213123	52 42321322	02 12231134	52 43433222
53 21124224	03 22113133	53 32242433	03 42431334	53 42123133
54 11133321	04 13213122	54 11122433	04 32211334	54 32431232
55 12312132	05 22132133	55 31113343	05 31133212	55 32231212
56 22423424	06 43132121	56 44212231	06 32344311	56 32242332
57 21342332	07 32342313	57 43313321	07 43343211	57 21324322
58 31121124	08 31231243	58 44311344	08 12433423	58 12323443
59 31113234	09 22324312	59 32243134	09 43243231	59 42331213
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61 31232234	11 22311124	61 43121121	11 21132244	61 42242131
62 11223244	12 43222432	62 42224344	12 43113343	62 31312312
63 43124224	13 32322431	63 44233443	13 12433421	63 44322234
64 21342322	14 31133434	64 12342432	14 13442432	64 32324312
65 32122423	15 43423124	65 12432211	15 11124221	65 43223244
66 33212433	16 44431212	66 43312324	16 22234423	66 43233421
67 21121323	17 21122131	67 32312221	17 12442244	67 42432242
68 44334433	18 23432221	68 43222112	18 43112133	68 33423223
69 31133112	19 22124423	69 42443243	19 11313222	69 12234432
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71 31244322	21 31213311	71 22321331	21 22423432	71 11221332
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75 33312221	25 21344231	75 13123121	25 21244223	75 33322132
76 43423113	26 13443222	76 42244334	26 44321324	76 31342113
77 32311331	27 32234422	77 12233232	27 43224321	77 32433112
78 33432124	28 42324421	78 32122342	28 43322334	78 32131322
79 31211213	29 34212112	79 12443313	29 21333224	79 23432244
80 13432224	30 13342123	80 11324243	30 31131344	80 32122432
81 22433324	31 33442443	81 31212232	31 32443323	81 31321224
82 42323311	32 44231132	82 32213224	32 31122433	82 42132112
83 32422334	33 13423133	83 12432332	33 13443132	83 21211244
84 31312313	34 34442123	84 42131132	34 21134322	84 31324321
85 12313324	35 31344422	85 42322321	35 33423243	85 12243124
86 43212113	36 33122334	86 31322122	36 23442124	86 21224231
87 33442113	37 22443111	87 31222334	37 32423332	87 33442131
88 33422332	38 22321344	88 43243321	38 32434222	88 43322433
89 23334431	39 44221322	89 33322421	39 32423444	89 31131231
90 12244423	40 32233434	90 43243433	40 22132123	90 21213343
91 33222432	41 42332123	91 42233221	41 33112442	91 21312244
92 43433231	42 42323313	92 43342224	42 31232134	92 44242234
93 31234322	43 32213433	93 43123422	43 31243124	93 23344332
94 12312444	44 21231134	94 44231232	44 22331231	94 44333113
95 22134213	45 21342131	95 31134424	45 31312244	95 42343323
96 21313222	46 32432221	96 42244421	46 32442113	96 13232112
97 33112112	47 33432434	97 23422433	47 31132132	97 32421131
98 21132432	48 22243111	98 42133422	48 11134224	98 31344322
99 44223434	49 42123134	99 23332123	49 44422422	99 44213124
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## G1-2000 TOYOTA

Keyblanks:  
 HPC/Silca TOY38R  
 ILCO N/A  
 TAYLOR X174

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03 32342123	53 42324422	03 44432422	53 44312244	03 33123121
04 42332244	54 12432322	04 44223431	54 21343443	04 32423113
05 32234321	55 31124233	05 32233134	55 42133424	05 12313342
06 12332224	56 21112322	06 12421132	56 43221312	06 44421134
07 43242133	57 43324234	07 33221344	57 42324331	07 31132311
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10 21332422	60 44423433	10 43442224	60 31342312	10 12233431
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12 22313421	62 13132434	12 32134213	62 23132123	12 42111232
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14 43224211	64 43123244	14 12432122	64 42244432	14 22311231
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16 44242213	66 11331132	16 32442221	66 12332334	16 21344323
17 21323421	67 42313323	17 32444311	67 21122433	17 43322121
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21 22123111	71 42113233	21 22444334	71 31132131	21 12134222
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31 11224331	81 42431312	31 32423133	81 23423331	31 24312134
32 22134224	82 42442331	32 33122434	82 31244423	32 43122334
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48 21244224	98 43134233	48 22134321	98 43232432	48 32443234
49 32334243	99 43322124	49 42224434	99 42132424	49 32423434
50 21112313	00 12223123	50 33424223	00 24221213	50 43312422





## G1-2000 TOYOTA

### Keyblanks:

HPC/Silca TOY38R

ILCO N/A

TAYLOR X174

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53 12432133	03 13443331	53 43242313	03 43132444	53 12334321
54 31123322	04 31133421	54 21342122	04 42131121	54 31213342
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59 12432243	09 11213234	59 42343311	09 43443242	59 12324313
60 13342224	10 42132121	60 21132443	10 11222332	60 32423344
61 32433121	11 34243112	61 22442313	11 32232332	61 42231231
62 13443111	12 12423334	62 32324323	12 21313243	62 31122243
63 12313113	13 31332431	63 13422213	13 31311331	63 42342432
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66 13224433	16 21223132	66 43442111	16 43321331	66 12322134
67 13421134	17 43124321	67 21123243	17 33224224	67 22312344
68 33124433	18 23422334	68 43221343	18 21133443	68 13321332
69 42311332	19 12434334	69 43442113	19 23432422	69 21334233
70 43312243	20 13443423	70 31123311	20 11332132	70 21224433
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72 13334431	22 32211324	72 12422123	22 32442334	72 33312234
73 22133243	23 43233111	73 43212132	23 44221132	73 12444213
74 33422133	24 31112433	74 33311312	24 31211243	74 21233243
75 11213324	25 32444334	75 11244223	25 44233123	75 43113322
76 32433312	26 24213221	76 23433244	26 32242334	76 43322123
77 23133132	27 11313443	77 43231244	27 42234221	77 13344421
78 32332324	28 42232133	78 43122442	28 32444322	78 23223111
79 33223322	29 44324333	79 24432224	29 11331231	79 23332132
80 33113431	30 42423121	80 21324313	30 12233131	80 31122124
81 13112324	31 43343443	81 32112432	31 32112313	81 12433234
82 42233223	32 22233233	82 32342322	32 31112334	82 23444332
83 43442132	33 42311234	83 44342312	33 22332424	83 22113431
84 32423321	34 12332434	84 33112122	34 32213243	84 32324331
85 42342312	35 43433224	85 42123443	35 22333122	85 11223233
86 21343344	36 43324443	86 44324313	36 44243131	86 11213434
87 43433434	37 44233242	87 12233223	37 44431312	87 42423421
88 31322133	38 43313211	88 44231242	38 42343421	88 32213324
89 32213312	39 43322343	89 42124424	39 42443121	89 12224432
90 21344212	40 32344232	90 31243312	40 42331221	90 42113244
91 22342111	41 21131244	91 21133243	41 42423344	91 24312421
92 42344422	42 44324321	92 22433344	42 23443242	92 32121324
93 33221324	43 43124323	93 12232231	43 12423121	93 31332234
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97 42133113	47 44233213	97 44322423	47 44324234	97 32243212
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## Don't Get Ripped-Off!

"Illegal schemes are costing the small businessman billions of dollars a year. There are some things you can do to protect yourself and your company."

by Fred Steingold

*As small business owners, locksmiths are subject to many offers, some of which are not all they are cracked up to be. Learn how to protect yourself and your business.*

Scams. Con games. Rip-offs. Will your business be the next victim?

According to the Better Business Bureau (BBB), illegal schemes are costing businesses about \$200 billion a year. "Small businesses are particularly vulnerable," says the BBB's Sara Woodward. "These small businesses don't have the resources to keep track of bills and invoices, and to check into offers that

promise to save money."

Recently, a man claiming to be a manufacturer's representative approached businesses with promotional items such as calendars, coffee mugs and keychains. He offered attractive prices on the merchandise, which was to be personalized with the name of the business. To take advantage of the low price offer, the business needed to make a substantial deposit or pay the full amount in advance. Some 27 companies (mainly small businesses) paid \$6,000. The merchandise never arrived.

Fortunately, complaints to the local BBB led to an investigation of this scheme. Criminal proceedings are

pending against the phony manufacturer's rep.

To help protect your business, be aware of the following schemes:

**Paper Pirates**—Someone calls your company claiming to represent your "regular supplier of office products." The call is passed along to an employee who operates your photocopier. The caller, to "update her files," asks for the make and model number of your photocopier. She then says that it's time to reorder supplies and your employee approves the order. The supplies arrive and the bill is paid. During a maintenance call, the technician discovers that you're using inferior paper which could harm the equipment.

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There are many variations of the paper-pirate swindle. The BBB recommends that you never buy goods from a new supplier by telephone or mail until you have verified the supplier's existence and reliability. Also, insist on open account billing rather than COD shipments; if there's a problem, you'll have some leverage.

Put a specific employee in charge of ordering, receiving and paying for supplies. Caution employees against giving out information on makes and models of office equipment over the phone.

**Phony Invoice Schemes**—You receive an invoice for an advertisement in a publication targeted at a particular ethnic or special interest group. Actually, it's not an invoice at all but a solicitation carefully designed to look like a legitimate invoice. Small print may identify the bogus bill as a solicitation. You pay the solicitation and later discover that the publication was phony or that no ad actually appeared.

The BBB recommends that before placing advertising, you verify that the publication exists and that its circulation suits your needs. Additional measures include channeling all bills through one employee or department, insisting that employees fill pre-numbered purchase orders for every order placed, and verifying all invoices to be sure that someone in your company actually authorized the order.

Sending an invoice that is actually a solicitation is a violation of postal service regulations. These regulations require disclaimer such as this: "This is not a bill. This is a solicitation. You are under no obligation to pay unless you accept this offer." The disclaimer must be printed on the solicitation in very large type. Unfortunately, unscrupulous operators ignore the regulation.

**The Charity Plea**—A well-dressed man introduces himself as a representative of a non-profit corporation that helps needy families. He hands you a glossy brochure with pictures of the families and graphic descriptions of their difficulties. The brochure includes a chart showing the "fair" contributions from companies of various sizes. Your business make a contribution. In fact, less than 10 percent of your contribution will actually help needy families. The rest goes toward high salaries for the fund raisers and extravagant overhead charges for the organization.

In one variation of this scam, a promoter asks your business to buy a

block of circus tickets. He states that the tickets will be given to handicapped children, and that ticket revenue will benefit a certain charity. In another variation, the promoters claim to be connected with a local police or sheriff's department. They tell you the funds will be used to help troubled young people or the families of slain police officers. What's really happening is that the promoters are skimming off much of the income for themselves.

The BBB recommends that your business inform itself about charities before making donations. Ask for and review the charity's complete annual report. The BBB recommends that at least 50 percent of a charity's income be spent for charitable purposes. Also make sure that the IRS recognizes contributions to the organizations as being tax deductible. You can determine that by contacting the local IRS office or by asking the organization for a copy of its "Letter of Determination."

**Loan Broker Frauds**—Your company needs some expensive new equipment. Unfortunately, you're already heavily in debt, but you respond to a newspaper ad offering "non-secured loans to credit worthy individuals." You meet the "loan broker" at a local hotel and he assures you that loan funds are available. He fills out several official looking application forms which you sign. He assures you that you'll receive your funds within 10 working days. All he needs now is \$1,000 for advance loan fees and processing charges.

You come up with the money in a few days because it seems like the only way that you can get funds for your needed equipment. Several weeks pass and, contrary to the broker's assurances, the check is not in the mail. You call the broker at the listed phone number. The phone has been disconnected. What's more, the broker's post office box has been closed.

To avoid this type of scheme, the BBB recommends that you require the broker to give you full information in writing about his services at least three days before you sign a contract or pay any fees. Be cautious of a loan broker who pays little attention to potential risks or who discourages you from consulting a lawyer or an accountant. Also be wary about brokers who continually arrange meetings at hotels, airports or restaurants, or who require money up front. Any advance payments should be placed in an escrow account.

"...and if you place your order today,

we'll send you a personal computer as a free gift." It sounds too good to be true. But you find yourself telling the voice on the other end of the line, "OK, send us 1,000 pens,"—a five-year supply for your company. The order arrives COD. The computer turns out to be a hand-held calculator!

This "free-gift" come-on takes many forms. The caller may tell you that you're one of a limited number of businesses eligible to enter a contest in which every entrant wins one of several prizes, or the salesperson may say that these gifts were donated by suppliers as a tax write-off. The products you receive may be inferior—worth far less than what you pay for them. And the free gift or prize may have a redemption charge, handling fee or other hidden cost. What's more, the value of the gift is usually misrepresented. A free weekend vacation for two may require you to pay for meals and transportation or you may have to pay a large "reservation charge."

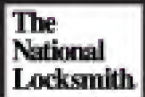
Be wary of any promotion involving gifts or prizes. Too good to be true? You bet. It's easy to get suckered. The gifts dangled before you can sound very attractive: a video recorder, a microwave oven, a cruise. But generally, there's a costly catch. The offers usually come in an unsolicited phone call. Be suspicious if the salesperson wants you to make a decision quickly.

An additional word of advice from the BBB: Avoid charging orders to a credit card. The free-gift con artists have been known to add unauthorized charges to a credit card account after receiving the account number over the phone.

Contact your local Better Business Bureau for additional information on these and other scams. Especially helpful is the 191-page book called *How to Protect Your Business*. You can order a copy by sending a check for \$8.95 plus \$1 for postage and handling to the Council of Better Business Bureaus, Inc., 1515 Wilson Boulevard, Arlington, Virginia 22209. ■

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# Key Blank Corner

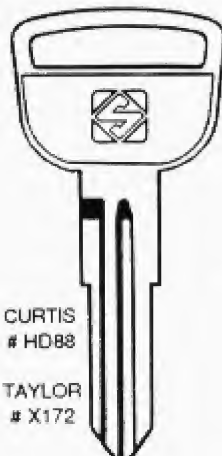
'88 FORD FESTIVA/  
MERCURY TRACER



TAYLOR  
# X131

MAZ12BP

'88 HONDA  
CIVIC

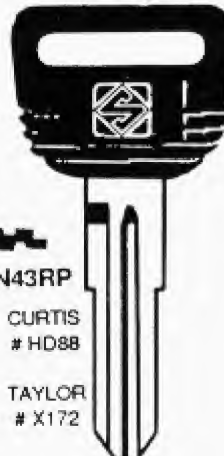


CURTIS  
# HD88

TAYLOR  
# X172

HON43R

'88 HONDA  
CIVIC



HON43RP  
CURTIS  
# HD88  
TAYLOR  
# X172

'88 HONDA  
CIVIC VALET



HON44R  
TAYLOR  
# X173

'88 HONDA  
CIVIC VALET



HON44RAP  
TAYLOR  
# X173

New From HPC/Silca

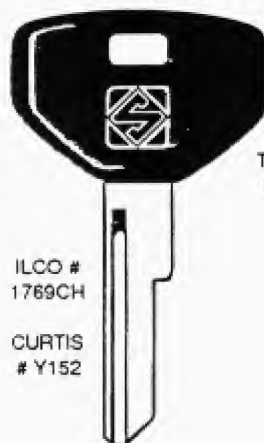
'84-1/2 FORD  
PRIMARY



ILCO #  
1184FD  
CURTIS  
# H54

FO18P

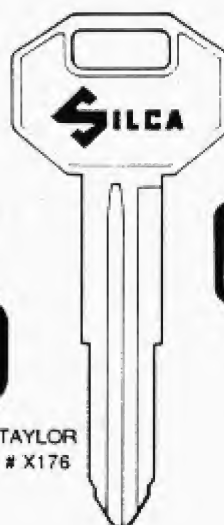
CHRYSLER  
PRIMARY



ILCO #  
1769CH  
CURTIS  
# Y152

CY15RP

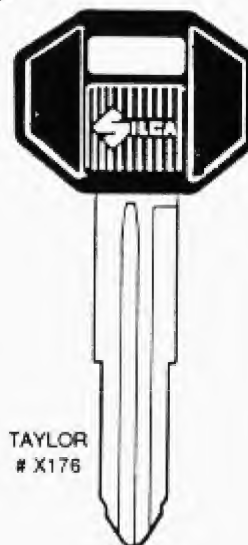
'88 DODGE  
COLT



TAYLOR  
# X176

MIT8

'88 DODGE  
COLT



TAYLOR  
# X176

MIT8P

Briggs & Stratton Technologies has announced the availability of 2 new Ford, Lincoln, Mercury 10 Cut key blanks. The large head key blank services: Aerostar, Sable and Taurus vehicles. The smaller head key blank

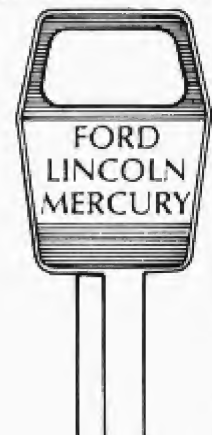
**Briggs & Stratton**

is for use with Lincoln, Mercury models plus the new 1988 Ford Tempo and Topaz.

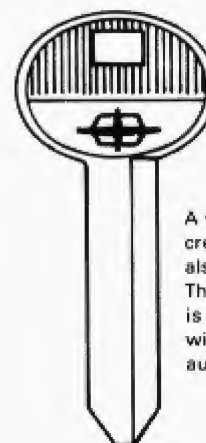
## NEW 10 CUT SERVICE KEYS



321645



321648



320517

## NEW LINCOLN SECONDARY

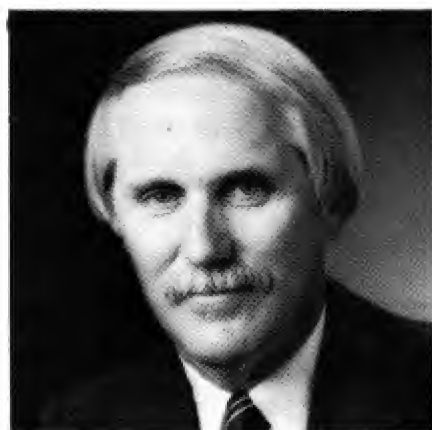
A very special Lincoln crest secondary key is also being announced. This specialty key blank is designed for use with all Lincoln model automobiles.



# Business Briefs

## McFadden Joins Abloy As OEM Sales Manager

Dave McFadden has joined Abloy Security Locks as OEM Sales Manager. In this newly created position, McFadden will direct OEM sales efforts in the Northeastern United States.



Prior to joining Abloy, McFadden was National Sales Manager for All Lock Company. Dave and his family will reside in New Jersey.

## Ontario Locksmiths Award Canada Lock

At the 1987 Association of Ontario Locksmiths' annual convention an award presentation was made to Canada Lock Products. This award was presented by TAOL in recognition of Canada Lock's dedicated service to the Locksmith Industry. Accepting the award is Jack Laufer (President, Canada Lock Products) from Don Dekyter (President, The Association of Ontario Locksmiths).



## Locksmith Supply Co. Expands Facilities

For the past 26 years, Locksmiths Supply Company, of Melbourne, Australia, have marketed their product range in the Sydney area, through the marketing organization of D.M. Tulloch Pty. Ltd. Due to changes within the Tulloch organization, the long standing, and most satisfactory arrangement, ceased on February 15th.

Locksmiths Supply Company has now purchased a 5,000 square foot building in North Parramatta, and will conduct their own sales operation in the State of New South Wales. They are the only distributor with their own organization in the two major cities of Australia.

Mr. Tom Tate has been appointed manager for New South Wales. Tom has 25 years experience in the industry, and his product knowledge is unique.

Locksmith Supply Company will stock their product range, which includes, Silca key machine and key blanks, H.P.C. specialized locksmithing tools, and KEKAB security key storage cabinets. A full product range for the locksmithing industry has been maintained for many years, as well as a complete range of locks, of local and imported origin.

Locksmiths Supply company was established in Australia in 1926 by Aub Johnson and trading as A.F. Johnson & Co. until the change of name in 1946 to Locksmiths Supply Company. Mr. Mark Johnson is the new managing director, with Stuart Johnson as board chairman.

## Arrow Lock Strengthens Marketing Organization

P. Richard Garofano, AHC, has joined Arrow Lock as Marketing Manager of contract hardware. Garofano has served 31 years with Emhart Corporation, most recently as General Manager of Russwin, and is a graduate of the University of Hartford.

Garofano will provide programs and services to contract hardware customers, while Martin Rosenfield will service the needs of wholesalers and locksmith distributors.

## Garfinkle Appointed National Sales Manager

S. Parker Hardware Mfg. Corp. has named Joyce Garfinkle as National Sales Manager. Ms. Garfinkle comes from a sales managerial background of products closely related to Parker's and has extensive knowledge of the marketing of hardware to consumers and the building trades.



## Medeco Appoints Taylor Distributor Sales Rep.

Medeco Security Locks, Inc., a high security lock manufacturer in Salem, Virginia, announces the appointment of Bob Taylor as Distributor Sales Representative in the Northeastern Region. Taylor, who will be based in the Baltimore-Washington area, will be responsible for distributor sales in Maryland, Washington DC, Virginia, West Virginia, and eastern and central North Carolina.

Bob Taylor was formerly an OEM and Distributor Medeco Sales Representative for Colorado, Utah, Wyoming and New Mexico.





## Myers Named Northern Region Sales Manager

American Lock & Supply, Inc. Vice-President Bill Power announced that on September 7, 1987 Rick Myers was named Northern Regional Sales Manager. The position places Myers in direct control of the outside sales staffs of the Fremont, Seattle and Denver branches of the large security products distributor.

Myers, 26 years old, possesses a solid, well-rounded 10-year background in the security wholesale business. Beginning with American while in high school, Myers' career began in the Anaheim warehouse in 1977. Since then he has performed at nearly every sales position in the company. He first moved to will call sales in 1979, and then to the inside sales desk a year later. In 1982, he began a three-year stint as an outside sales representative. Since 1985, Myers has worked at the Anaheim headquarters as the company's sales administrator.

During his American career, Myers has attended classes at Cal State University at Fullerton, working towards a Business Administration degree, which he will earn in December of this year.

Recently married, Myers and his wife, Julie, live in Westminster, CA.

## Schlage Promotes Hannafin To Nat'l. Accounts Manager

Mary Hannafin, resident of San Francisco, California, and employee of Schlage Lock Company, has been promoted to National Accounts Manager. Mary will be responsible for directing and coordinating sales and marketing programs for the key national accounts. She will be the corporate liaison to distributors in the wholesale and retail channels of distribution throughout the United States.

She brings to her new position the knowledge and expertise in sales and marketing acquired from her past experience in consumer merchandising services.



## Simplex Promotes Nazziola To V.P.

Thomas Nazziola of Simplex Security has been promoted to vice president of marketing. He formerly held the position of National Sales Manager. Tom joined Simplex over 11 years ago.

## Sentry Group Appoints Brush

Sentry Group, manufacturer and marketer of Sentry® FireSafes™ and fire-resistant storage containers, has named James Brush to the position of corporate sales and marketing manager.

Brush joined the company in April 1986 as corporate sales manager. Previously he had served as a marketing manager with International Business Machines. A graduate in Economics of St. Lawrence University, Brush holds an M.B.A. in Finance/Marketing from Northwestern University.

A native of Rochester, he currently resides in Pittsford, NY, with his wife, Cathy, and their three children.

*Continued on page 104*

# Major

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# Shop Talk

Helpful Questions and Answers

Written by *all* of the following authors: Don O'Shall, Dave McOmie, Jack Roberts, Robert Sieveking, Shirl Schamp, and Steve Spiwak.

Send your locksmith questions, along with a self-addressed stamped envelope to: Shop Talk, The National Locksmith, 698 Bonded Pkwy., Streamwood, IL 60107.

Thanks to Bill Edwards for calling in an I.D. on the padlock pictured on page 73 of the February 1988 Shop Talk. Bill tells us that the 4 1/4 lb. monster is a jail lock used to secure prison gates on even cells.

Often these locks are customized for individual jails. This one features a

Yale keyway and is sometimes called a "Yale Mogul." The lock's owner was looking for a key. Bill suggests contacting Kustom Key Company as a possibility.

\*\*\*\*\*

*Q: Please send me information on opening the 1988 Ford Taurus.*

*I would really appreciate it.*

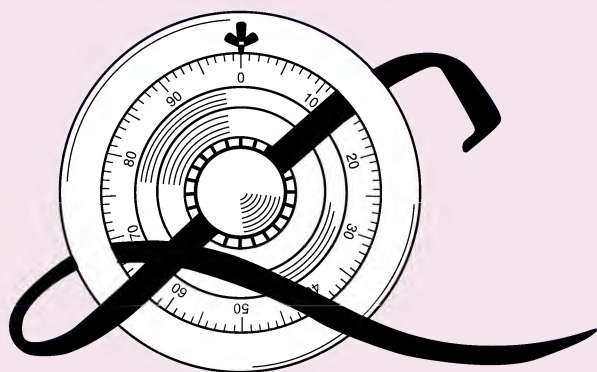
*Thomas Dandy  
Florida*

*A: Opening the 1988 Ford Taurus shouldn't present any major problems. I have found that with most all the newer Ford products and some other makes that going under the lift handle is by far the simplest method. Of course*

that doesn't exclude other methods as valid.

To hook button rod itself, use a stiff piece of wire with a small hook on the end. (The wire should be as small as possible still leaving it large enough to go around a linkage rod.) Insert it under the lift handle until it hits the panel. Move the tool sideways until you hit the rod. Pull back thus hooking the rod. Apply torque, and lower your end of the tool thus raising the button.

On the other end of the same tool place an "L" bend, maybe 2", not over 3". This can often be used to enter under the handle and when it hits the linkage rod, let it follow the linkage upward until it hits the bottom of the button. Continue pushing upward raising the button. The buttons on the



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Taurus are the large ones, and sometimes don't want to raise straight up causing a slight bind. Use the hook end like. I described using the "L" end. It's easier than you would think to hit the bottom of the large button cap. 02

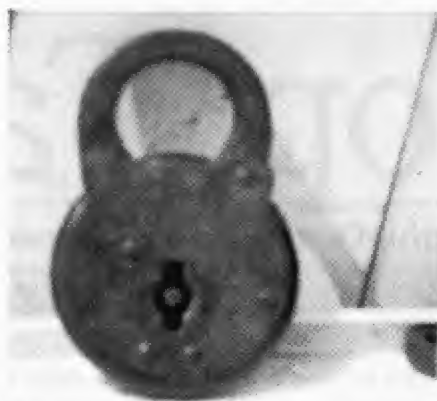
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*Q: Enclosed you will find pictures of an old padlock and an old key, which I have come across. The padlock has Eagle, 6 lever, written on the front. On the back, patented June 1914 is written.*

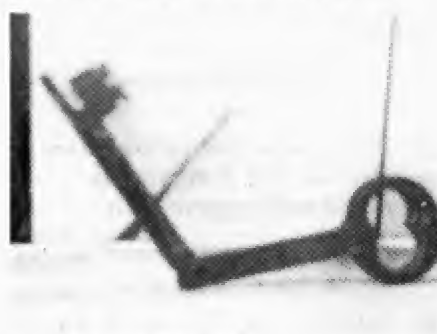
*I haven't tried to open it. I would like to know if you are familiar with this lock and its value. The key is a hinged key (see photographs 1 and 2.) I would appreciate any information you might share with me about this padlock.*

*Jack Medley  
South Carolina*

A. Yes, Jack, you have come across a couple of old pieces and that's just about all they are—a couple of pieces. Your Eagle lock is one of a common design manufactured during the early part of the century by just about every manufacturer of that period. Yale may have been the first with this design, but it was also produced by Miller, Safe,



1. Antique eagle six lever padlock...



2. ...and hinged key.

Sargent, Corbin, Segal, etc.

This same style was also made as an eight lever model and of brass as well as

iron or steel. Your lock has opposing levers, three on each side, and if you care to make a key for it you can practice your impressioning skills by using a Taylor 660 blank. Be sure to insert the blank into the keyhole the same way each time. Collector catalogues list this lock at \$1.00 to \$4.00.

Your jack knife key was designed as a convenience item that made it easier to carry in a purse or pocket. Early doors were often rather thick and a surface mounted lock on the inside of the door required a long reach to get to the mechanism. These locks were operable by key from the outside only with no keyhole on the inside, which accounts for the design of the bit. A couple of bucks would be tops for a collector, but you could write to Don Stewart, Executive Director, Key Collectors International, P.O. Box 9397, Phoenix, AZ 85068, for more information. Many thanks for letting our readers see these pieces of our history. 03

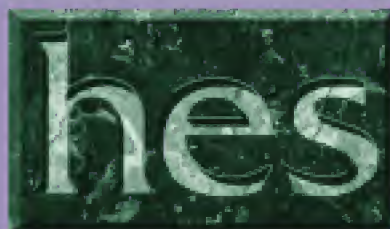
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*Q: I have a Murphy wall safe that has been collecting dust in the back of my shop for many years. I've recently pulled it off its shelf and have been*



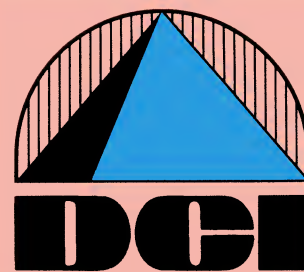
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trying without success to manipulate it open. Most of my problems arise from the fact that I have no idea as to what the correct operating procedures are on this particular safe.

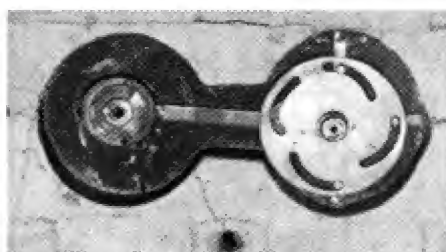
The combination knob lifts away from the dial face about 1/8th of an inch. Does the knob have to be lifted while dialing in the combination? Additionally, how many wheels are in this wheel pack? Any information regarding this box will be greatly appreciated.

Would it also be possible to put an approximate value on this safe in fair condition (when operational)?

I find your magazine to be quite informative. Please keep up the outstanding work. Thanks also, to our fellow locksmiths who volunteer their learned experience and knowledge to the rest of us.

Don Strasser  
California

A: The Murphy is indeed a unique little guy. Here is all the information you will need, and a photograph to boot. (See photograph 3.) The door thickness is about 1/4" from the face of the door to the wheels. There are three 1 1/2" wheels. The dial has 80 numbers. Drop-



3. Inside the murphy wall safe.

in is at 3 o'clock (20 on the 80 number dial).

The odd feature is that the gates are not on the outside of the wheels—they are on the inside of the wheels!

Remove the dial, drill at 20 x 1 1/8. Using a scope, line up the little nicks on the edge of the wheels. When the nicks are lined up, this puts the gates in proper alignment. Now pull out the handle knob (about 1/8") and turn counterclockwise to open. There is no relocker.

04

\*\*\*\*\*

Q: I recently stayed in a nice hotel on a business trip. Instead of being issued a regular key, I received a plastic card approximately 4" x 1 1/4" with a pattern of holes at one end. Printed above the room number it said "VINGCARD."

On the back it said "made in Norway." How does it work? Who distributes them? Where can I get more information?

R. Burleson  
Texas

A: As a locksmith, it is very unlikely that you will ever be called to service or repair this type of lock, but your question is a very good one. I too was interested in the inner workings of the lock you have described. This is a Vingcard lock manufactured by Vingcard Systems, Inc. of Dallas, Texas, a division of AWI. (This is the same company that also manufactures rim and mortise cylinders.) All information concerning these locks is proprietary and therefore confidential. Installation and service is performed by factory authorized dealers only.

The lock you describe could be one of three different types. The first and original lock (model 1058) was a mechanical reader. With this lock, a code card containing 32 key changes was loaded into the lock by a maintenance person. This enabled the lock to accept 32 different guest cards, a number of maids cards, a floor master and a grand master. This constitutes

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four levels of mastering. A fifth level of mastering is accomplished by the mortise cylinder immediately beneath the operating lever. (The cylinder is mounted upside down.) The mechanical cylinder uses a restricted keyway and is accessed by the emergency key (EMK). The emergency key (or in-keepers key) is the only key that will retract or extend the deadbolt. It is used to open an occupied room or lock out a guest.

Once initialized, this lock will accept 32 different guest cards in sequence. The first guest would use card number one. A second guest, on check-in, would be issued card number two. Inserting card number two into the lock will block access by card number one and change the card combination to that of card number two only. Each time a new card in the sequence is used, it locks out all previous cards.

All guest cards will contain from 7 to 17 holes. All maids cards will contain 18 or 19 holes. All floor masters will contain 20 holes and all grand master cards will have 21 holes. The holes are arranged in a five by seven matrix. (See illustration 4.) This would suggest a thirty-five hole arrangement, but only thirty-two of the positions are used by

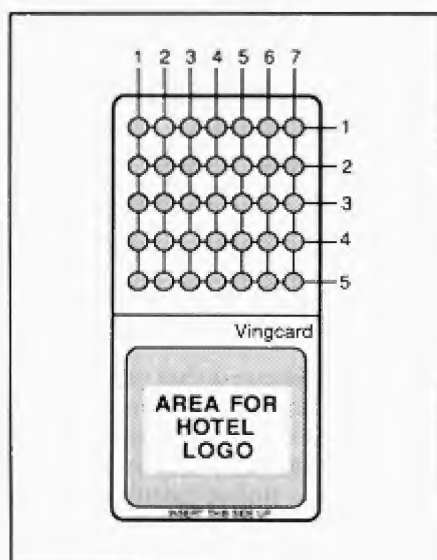


Illustration 4

the lock. The positions not used for holes, are used to detect the presence of a card in the lock. This would give  $2.1475 \times 10^9$  combinations, by my calculations. (2,147,500,000) Now that's a master key system. Even allowing for unusable combinations, that would service all the hotel rooms in the U.S. with some to spare. Try-out keys would definitely not be a good way to open this lock.

Solid state electronics, digital logic and optical readers are incorporated into the Series 1070 and 1080 Vingcard locks. These locks use an electronic memory chip to hold the 32 card keying sequence, maids level, floor and grand mastering codes. (This eliminates the necessity of replacing the plastic set-up card to reset the combination sequence.) The lock is powered by a nine volt battery pack (six AA batteries), and will operate up to three years under optimum conditions. When the proper card is inserted into the lock, an electric motor enables the outside lever and will allow the latch bolt to be retracted. If the door is not opened within approximately seven seconds, the mechanism returns to the locked condition.

The mortise cylinder, has two sets of top pins and can be recombined without disassembly. After the third key change, the manufacturer suggests that the cylinder be replaced.

This lock provides better security for the hotel guests in that each time the room is left, the guest receives a new key. Sadly, the lock does not require the services of a locksmith. 06

\*\*\*\*\*



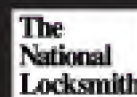
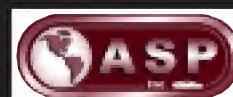
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## Business Briefs

*Continued from page 97*

### Pelley Named Marketing Director At Belwith Int'l.

In addition to his regular responsibilities as Regional Sales Manager of the Southwestern United States, Mark Pelley will assume the new position of Director of Marketing for the company.



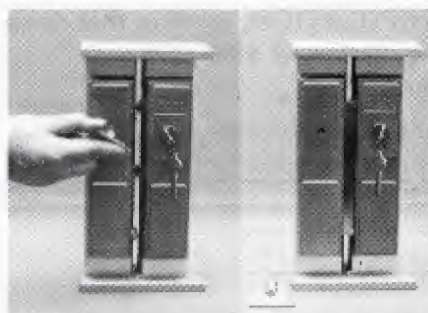
With a formal education in Marketing, four years of Retail Management and Merchandising with a major chain and ten years in Sales and Supervision at Belwith, Pelley brings outstanding qualifications to his new and challenging position.

### DorGard

*Continued from page 54*

Though the DorGard is a latch protector and cylinder guard, the last two DorGard units actually perform a secondary or auxiliary locking function to enhance the security of the existing lockset.

In photograph five a special key is used to extend the spring loaded hardened stainless shutter into the body of the DorGard mounted on the active door. The three "T" shaped tongues of the shutter interlock into the body of the door guard as the active door is closed to prevent the shutter from being retracted. As the lock in the active door is locked, a hook bolt



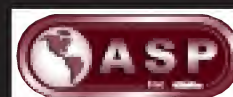
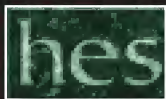
5. A special key for extending the shutter.



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rotates to deadlock the "T" bars into the active DorGard. Both doors are now securely locked together. The shutter locks the doors against spreading attempts and shields the bolt against hammering or sawing attacks.

The Adams Rite lock normally only prevents the doors from swinging. The DorGard extends the protection to prevent the doors from being spread apart or moving away from each other. When the door is unlocked, the shutter plate automatically retracts. This lock could have application on sliding glass door panels, like those found in malls or shopping centers. As with all other DorGards, all exposed metal is either 316 or 17-4 hardened stainless steel. The operation of the DorGard IV and V is impressive. The operation of the DorGard V is the same as DorGard IV, except that the five is designed to lock the active door to a jamb instead of to a second door.

Installation of the DorGards require a special jig to locate the mounting holes. Two jigs are available, one for locating the sixteen mounting holes in the stile of the door and one for locating the twelve holes in the jamb. The jigs also have the option of being used with a router to open the lock and latch holes in blank doors and jambs. Hardened drill bushings in the jigs accurately locate all holes in one operation. Though the guards could be installed without the jigs, I would highly recommend that if you plan to install many of these devices, you obtain them.

The quality and finish of everything I saw was very good. The installation instructions were clear and complete. The literature and handout advertising were impressive.

Special primary housing and plug protectors are available to accommodate Abloy high security cylinders. If you have a special application problem or a unique situation that would benefit from the use of a DorGard protector, write or call Scotsman Security Products, P.O. Box 1250, Pine Grove, CA 95665, (209) 295-5498. ■

### Volvo

*Continued from page 60*

springs which allowed the two tumbler halves to operate on two separate planes (see photograph 7). However, unlike Mercedes tumblers which form a side-to-side configuration, the Volvo tumbler system may be top and bottom left side, top and bottom right side, or top and bottom both sides!

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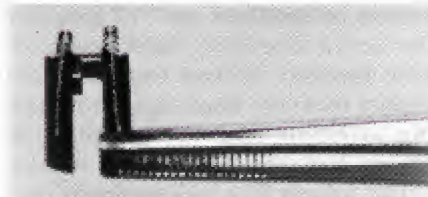
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7. View of tumbler and two tumbler springs, allowing scissor action, split in half.

This particular key yielded the following combination when decoded:

space	1	2	3	4
depth of tumblers facing toward bow	5	4	5	3
depth of tumblers facing toward tip	2	5	4	1

The following is the spacing and depth chart for the new Volvo: spacing as measured from the tip:

1 - .258
2 - .428
3 - .598
4 - .768

depths, in increments of .020, as measured from the bottom of the blade to the top of the cut:

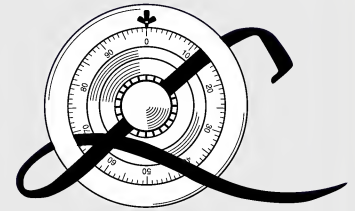
1 - .295
2 - .275
3 - .255
4 - .235
5 - .215

The key is then cut using the same procedure as Mercedes (detailed in the Mercedes article in the February 1988 issue of *The National Locksmith*). Simply cut a pattern key using the measurements that we have just determined. Then cut a key from the pattern key onto a 1988 Volvo key blank (HPC/Silca number NE66P) using an appropriate high security type key machine. Photograph eight shows the

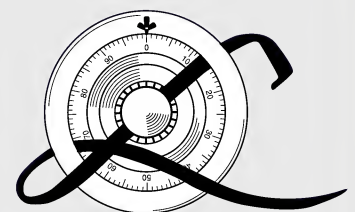


8. Correct Volvo high security key.

completed correct key, notice the squared off tip. When the correct key is inserted into the locks, it draws all the tumblers into the plug creating a perfectly smooth cylindrical surface. ■



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## Safe Deposit Locks

*Continued from page 66*

fences set to this combination. The screw can also now clear the lock body allowing the bolt to be extended. With the key removed, the levers being identical, all fall to a nice neat stack and block movement of the bolt/fence assembly to the open condition. The fences hold the combination.

Since the guard side is not responsible for any bolt movement, there is no change index. However, the principles in its change procedure are the same as those of the renter's side.

Well, the inevitable has happened. You have just received a call involving a locked box and lost keys. This is right up your alley. The formalities and legalities are addressed and an appointment is made. Let us examine our approach. Drilling for mounting screws is out. The bolt in its extended position covers one of the mounting screws preventing its full removal. How about the hinge screws? I feel this should be considered a dead end also. When the door is attached to its hinge it is "slid" into the mounting fingers of the hinge and then fastened by the screws. So you could drill and find the door still quite locked.

Besides all this, we must remember what is practical in any given situation. In this particular instance we are faced with a \$19 disposable lock. It is drill and repair, or drill and replace. Yes, the dollar wins again. Drill and replace. This lock was designed with this in mind. Take a moment to look at the parts listed in illustration four. The part numbers that I have added an asterisk next to are not even available. Let's go!

1) Drill ( $\frac{3}{8}$ " bit) straight down the renter's post. 2) Continue to drill until you have gone through all seven levers. Remove the drill often to inspect progress. 3) Pull drill out about  $\frac{1}{2}$ " and with a very slight angle upward, drill through levers once more. What you should have accomplished is to shear away the bottom portions of each lever's gate. 4) Lift up what remains of these levers with a pick or other suitable tool high enough to clear any high fence. 5) Pull the bolt back, open the door, and replace lock.

However, there is another method you can use which may be easier or more interesting than the method above. This other method might also help keep you out of trouble. 1) Pull the nose using the standard procedure for



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pulling the nose on a safe deposit box with drop away levers. 2) Look at the stack of levers. Using a T-2 or cobalt bit ( $\frac{1}{8}$ " ), drill completely through the stack of levers. Make sure you drill straight in—not on a tilt. Be especially careful not to drill on an upward tilt, or you could drive the levers up. Drill just enough to penetrate through the back of the lockcase. Drill the hole in the location shown by the lower arrow in illustration five which is pointing to the shaded area. (The lowest arrow points to the drill position which is about 10:30.)

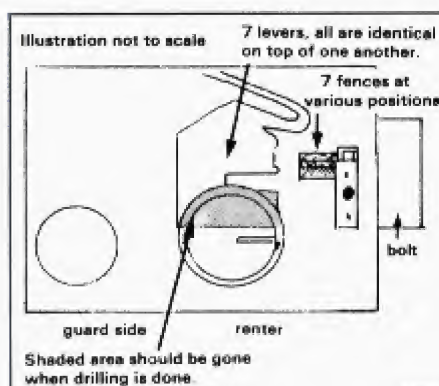


Illustration 5

3) Remove the drill bit and get a 3" piece of  $\frac{1}{8}$ " diameter spring steel wire. Sharpen the end of the wire to a point. Fish it through the hole you just drilled through all the levers. Push it through the hole in the back of the lockcase. All the levers are now locked in place. Leave the wire in place. Now you can drill the levers without moving them. 4) Using the  $\frac{1}{8}$ " bit, drill a pilot hole through the center of the levers at 12:00. Do not penetrate the back of the lockcase. Remove the bit. 5) Take a  $\frac{1}{4}$ " or  $17/64$ " bit and drill through the center of the pilot hole you just drilled. As you go, each lever will fall to the bottom of the lockcase. 6) Remove the wire that was holding the levers. Insert a tool or screwdriver on the lefthand side and lift the remaining portion of the levers to their maximum height, thus clearing the fence. 7) Reach in with a wire and pull the bolt back. *Important note: This is the procedure for a left hand lock. Reverse the drilling locations for a right hand lock. Also, for your information, the 175-70 has been designed to fit the same door as the 175-05 lock.*

A couple other reminders before closing. When ordering remember the locks are handed. Also, only use Diebold's change tool for the aforementioned change procedure. *Do not substitute.* ■



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